DOCUMENT RESUME

ED 192 793 IR 008 874

AUTHOR	Crandall, David P.
TITLE	Linking Agent's Tool Kit. Part One: The Linking Agent: An Overview. Consortium Report Series.
INSTITUTION	Network of Innovative Schools, Inc., Andover, Mass.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C. Dissemination and Resources Group.
PUB DATE	79
CONTRACT	400-76-0090
NOTE	90p.; For related documents, see IR 008 874-876.
AVAILABLE FROM	The NETWORK, Inc., 290 South Main Street, Andover, MA 01810 (Parts 1, 2, and 3, $35.00/set).
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Change Agents; Consortia; Educational Change; Elementary Secondary Education; Information Sources; *Linking Agents; Program Development; *Program Implementation; *Program Improvement; Public Schools; Research Utilization; Skills
IDENTIFIERS	*Research and Development Utilization Program

ABSTRACT

The first part of a 3-part guide developed as a resource for people involved in the selection and implementation of new programs in school settings, this overview describes a wide range of linking agent roles and skills, and discusses training and support mechanisms for linking agents. Chapters address (1) the assumptions underlying the overview, (2) major perspectives on the current practice of linking agentry, (3) the nature of the resource systems and the common sources and attributes of the innovations that are typically the nucleus of program improvement efforts, (4) the client system as a complex social system and as an organization subject to a multitude of influences, (5) the host agency responsible for supporting the needs of the linkers it houses, (6) the attributes and skill clusters associated with the multiple roles of the linking agent, and (7) systematic problem-solving as a means of focusing future efforts. References are provided. (PM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED192793

LINKING AGENT'S TOOL KIT

by

David P. Crandall, Ed.D.

A Publication of

The NETWORK

David P. Crandall, Executive Director
David Max McConkey, Director

The NETWORK, Inc.
290 South Main Street
Andover, MA 01810

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

John J. Ford

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

IR008074

PREFACE TO THE CONSORTIUM REPORT SERIES

There are several indications that the R&D Utilization Program was a complex undertaking. There have been attempts to help schools become better problem solvers, thereby introducing change as an appropriate response to problematic conditions, and there have been attempts to help schools apply existing R&D. RDU, however, was an explicit attempt to introduce change in schools through group problem solving and the application of existing educational R&D.

RDU was also structurally complex. Rarely, for example, are programs developed that both fund an activity and provide the wherewithal to study it. Typically, contractors and grantees of research projects are told outright that funds are for research purposes and not for operational components of the phenomenon being studied, while service projects and demonstration programs allocate such a small portion of their budgets to evaluation (even broadly conceived) that little by way of findings is produced.

The Consortium Project not only accepted these challenges, it introduced some of its own. Its linking agencies, in addition to being geographically dispersed, were also diverse in their structures, missions, staffing, and orientation to schools. Secondly, there was a deliberate attempt to select schools in each state that reflected a demographic mix, so that we could experiment with linking agent strategies in urban, suburban, and rural settings. Furthermore, schools were selected for participation in the program based on the probability that solutions to their problems would impact on several aspects of school life. Quite obviously, both the project and the RDU program at large have been a rich source of experience for study and reflection.

It is appropriate, therefore, that at the end of such a program there be more than one publication to document the effects of its presence and to provide as many perspectives on the experience as possible. Before commenting on the volumes in the Series, however, I would like to acknowledge the work and the intense involvement of the project's linking agents and their supervisors.

Consortium linking agents were faced with the awesome tasks of not only helping schools introduce curricular improvements, but also of helping to define and implement a new role. In

addition they were asked to document their activities to provide the research component of the project with baseline material for developing case studies. To Donna Bellorado, Nancy Dannenberg, Joseph DeFaolo, Leslie Hergert, Carol Johnson, Linda McNeely, Lana Rann, and Beverly Vifian goes a sincere thanks for your energy and your willingness to put yourselves under several microscopes. Thanks also for representing the project in interviews, newsletters, and various professional meetings and forums.

In addition to working with these linking agents I have been fortunate to work with several experienced educators who acted as agency supervisors and subcontract managers for the project. They include James Connett, Diane Lassman, Max McConkey, Norman Oppenheim, Harry Osgood, Ralph Parish, Margaret Robinson, and Keith Wright. On several occasions they were called upon to rise above their individual and agency priorities to act in the best interest of the project, and each time they did.

The Consortium has been characterized as an anomalous collaboration among competing agencies. From my perspective, however, the collaboration was not an anomaly; it was the product of commitment, confrontation, openness, and hard work on the parts of these linking agents and supervisors.

Three of the five volumes in the Series were produced from the Research Component of the project. They evolved from the developmental work of Dennis Collins, acting in collaboration with the research directors of the other six RDU projects. It was this early developmental work that gave shape to the linker's documentation procedures and influenced the variables ultimately reported on in the three publications.

Responsibility for the conceptualization of the school-level studies, Case Studies in Program Improvement, fell to Barry Gold who developed the framework for the studies with case writers Elliott Krause of Northeastern University; Ruth Anne Olson, a private consultant; and John Nickel, Wichita State University. Case research and preparation was also done by Alfred Wilson from Kansas State University and Mary Ladd Smith, another private consultant. The cases were designed to describe the project in its first two years at the site. At the end of the third year, epilogues of each case and a cross-case themes chapter were developed by Terrence E. Deal, Holly Gunner, and Martha Stone Wiske of the Harvard Graduate School of Education.

In editing the school-level studies, Christopher J. Drew coordinated the work of eight researchers in three states and regularly mediated conflicts between the researchers and the linkers under study. I am convinced that the cases are enlightening and the cross-case analysis compelling because of his active attention to argument and style from the early drafts to the final copy.

In preparing The "Inside" Outsiders: A Study of Three Consortium Linking Agents, Dr. Beverly Loy Taylor (Center for Policy Research, New York City) inherited a partially conceived conceptual framework, a great deal of already collected data, and an incredibly tight timeline. Rather than complain, she dug in: tightened the framework, found and filled gaps in the data through interviews, observation, and extensive document analysis, and stuck to her timeline. As project director, I was pleased with her thoroughness; as a professional, I am impressed with her monograph.

Chris Drew also conducted his own research within the project. His publication, The Consortium Project: A Study of Interagency Collaboration, is a description and analysis of the project itself and is based on his observations of the project in action. His interviews of me, conducted at intervals throughout the project, I found to be thought-provoking and professionally challenging. What he was able to use as data, I was able to take as feedback, and I believe that both of us benefited from the interactions. I certainly did.

Two project central staff took responsibility for providing several types of resources to linking agents. Peter Gardner and Susan Harris planned training events, conducted meetings, circulated information, and provided ongoing contact with the linkers. Their early work, providing resources related to specific aspects of the linker's role, created the prototype Linking Agent's Tool Kit, a collection of articles and resources. John J. Ford, III and Leslie Hergert accepted the responsibility to make the Tool Kit more generic. In the process, they have considerably upgraded the original set of resources and have added important substantive comments on the linker's role.

The Reflections book is our attempt to let project staff tell their own story. In addition to the story that unfolds, the articles also demonstrate that linking agents, like any group of practitioners, can play an important role in developing and sharing understandings about their experience. The writers

represented in the book deserve credit for their willingness to think about their experiences and put forth their own analyses for public consideration and scrutiny. In editing the book I was fortunate to have the benefit of the editorial skill of Joan Wilson who worked directly with the paper writers on matters of clarity and style.

The Consortium has relied on the administrative support of a number of people over its three year history including Claire Durocher, Nina Demeritt, Nancy Lund, and Zeina Azzam, who had the massive task of coordinating production of this series. In addition, we have had extensive technical support from Paula McCarron and David Pelletier of The NETWORK's Product Development Division, and from Richard Emery, a free-lance graphic artist.

I would also like to thank Thomas S. Israel of the National Institute of Education for his support throughout the life of the program and for his responsiveness and flexibility at times when our problems had no apparent solution.

One final note on the subject of contributors to the welfare of the project: in addition to the counsel and commentary of the aforementioned people, I have also had ongoing access to David P. Crandall, Executive Director of The NETWORK, who from the start of the project has made available his professional knowledge of research utilization and his experience in project management. His support has been invaluable and his influence on me over the years has been profound. I can only hope that the reports in this Series will reflect his high standards and his tireless quest to make NETWORK publications a contribution to the future, not a rationalization of the past.

For those of us who have lived with The Consortium since 1976, the Consortium Report Series will be, no doubt, the tip of the iceberg. We just couldn't get it all into print, and in truth, we didn't try. However, I believe that we've been honest with ourselves -- that we've not invented a tip of a make-believe iceberg -- and hope that there will be a great deal in these publications that others will find of use.

Richard C. Harris, Ph.D.
Project Director

FOREWORD

The LINKING AGENT's TOOL KIT was developed as a resource for people involved in the selection and implementation of new programs in school settings. The job of a linking agent is a complex one that requires a wide range of knowledge and skills. Linking agents can learn from the experience and research of such fields as consultation, educational change, curriculum development and educational dissemination.

This three part kit contains numerous articles about school improvement efforts as well as introductory commentary drawn from the editors' own experience as linking agents. These articles were drawn from over one hundred articles that were selected for possible inclusion in the Tool Kit. A prototype kit including all of the initially selected articles was sent for review to some fifteen professionals working as linking agents, supervisors of linking agents and in educational publishing.

Articles cover a wide range of issues related to school improvement. There are reports of relevant research, theory and craft based articles and planning instruments and checklists.

Part I - The Linking Agent: An Overview by David P. Crandall was originally published as "Training and Supporting Linking Agents" in Linking Processes in Educational Improvement, edited by Nicholas Nash and Jack Culbertson. It describes a wide range of linking agent roles and skills, and discusses training and support mechanisms for linking agents. The client organizations served by linkers are examined as well as resources which linkers can use in working with client groups. It also describes stresses inherent in the linking role and important implementation issues faced by linkers. This first part of the Tool Kit provides an excellent overview of the realities facing those playing linking roles and reflects the author's experience as a linking agent and as a manager of a linking agency.

Part II -- Selected Background Readings includes a variety of articles on such topics as consultation, educational change and linking processes. These articles are useful resources for linking agents in helping them to understand the complexity of school improvement efforts, the organizational structure of educational institutions and techniques and approaches to consulting with school personnel.

Part III - The Stages of Linking Agent Intervention contains an examination of each phase of the linking agent's work. These stages grew out of the assumptions and experiences of the editors and comments from reviewers. The editors, linking agents themselves, based the development of these stages on some specific assumptions.

- The work of the linking agent can be described sequentially even though the order of the stages may vary depending on the school setting and working style of the linking agent. Sequential stages bring order to a complex task and provide an organizing framework for an intervention;

- The linking agent's role is a proactive one. The linking agent is not only a facilitator of change but often acts as a manager in various stages in the school improvement process; and

- The nature of the linking agent's work is collaborative. School improvement efforts work best when the linking agent works collaboratively with school staff to solve problems instead of acting as an outside expert.

The stages described in the Tool Kit are: initiating the relationship; defining the problem; selecting a program; implementing the program; evaluating the program; and disengaging from the school district.

Each stage includes commentary by the editors as well as articles that provide greater understanding of the inherent issues in the stage and serve as resources to linking agents working in that stage.

The Tool Kit serves as a useful resource for such people as consultants in state educational agencies, State Facilitators in the National Diffusion Network, curriculum and program directors in local school districts, and other educational consultants.

AN OVERVIEW

INTRODUCTION

The last decade has seen hundreds of millions of dollars spent in attempts to improve the quality of American schooling -- dollars for new open-space buildings, dollars for carefully developed R&D (Research and Development) products, dollars to establish massive computerized information banks. These investments have yet to produce widespread improvements in schools; yet despite disappointments, there are numerous examples of modest but significant improvements in many schools across the country. An assessment of this recent history leads to the realization that things alone -- money, buildings, products, information -- are insufficient to change schools. Only people drawing on these resources can produce the needed improvements. Despite the centrality of technology in American culture, and the similarity of our system of schooling to an assembly line, education within individual buildings resembles more of a cottage industry, staffed by craftspeople, plying their trade in idiosyncratic, non-standardized ways. Schooling thus remains a highly interpersonal enterprise, mediated by human considerations, not by the requirements of technology or considerations of the marketplace. It is not surprising that a personalized medium -- the linking agent -- has emerged as the most promising means of bridging the gap between technological advances and individual educators striving for quality education.

The purpose of this article is to present a view of the realities facing those playing linking roles and to give direction to renewed efforts to develop training and support mechanisms for linking agents. Several years of experience as a linking agent and in managing a linkage agency have shaped the substance of this paper; during that time, successes and failures in work with hundreds of schools have led to insights and observations which may be useful to a larger audience.

This article is written for several audiences and will leave something to be desired by each. First, it will introduce the problems and potentials linking agents face, an introduction which, in the second place, may be useful to those responsible for managing the efforts of linking agents. Third, the next steps for federal planners and policymakers who are increasingly concerned with the state of dissemination and the proper role of the federal government in providing leadership to improve American schooling will be outlined.

The literature, with few exceptions (Jackson, 1968; Lortie, 1975, Waller, 1932), tells us little of what actually goes on in the classrooms of our schools. Similarly, we know little of the dynamics of educational program improvement efforts (but see

Bentzen, 1974; Goodlad, 1975; and Smith and Keith, 1971). Although this paper, by its nature, is not itself full of rich details of "life in the trenches," the observations and conclusions have been filtered through a knowledge of the practical gained from several years of first-hand experience and pain. What follows rings true for me and I hope will be received in that light.

Progress in understanding the complexities of linking will be made to the extent that interested parties are able to suspend disbelief, jump into one vision of the subject, poke around in it, push against it, test it out in their own setting, and through such experience find ways that work for them.

ASSUMPTIONS

The following assumptions are intended to restrict the content of the article. To the extent that the assumptions are not shared by readers, they can be thought of as springboards for dialogue in other forums. This paper does not attempt to justify in detail:

1. The "clients" of linking agents will be people in schools, primarily in public schools.

2. In general, schools are unlikely to undergo any substantial structural changes in the next decade in the way they organize and conduct instruction and attend to organizational functioning. Furthermore, in most places the nature of teaching staffs will remain relatively stable and conservative although their mobility and numbers will be reduced by declining enrollments and unused buildings.

3. Linking agents are essentially intermediaries between the school systems they serve and the world of knowledge production and utilization; in general, their home base is external to the school system.

4. In the larger organizational environment which impinges on the school, there is a complex of actors who must be consciously dealt with by linking agents.

5. When linking agents' work with a client system involves a full-fledged problem, it must account for the organization itself as well as the individuals within it.

6. Linking agents must deal consciously and competently with the issue of power distribution and its potential effects on both maintaining the status quo or supporting program improvement efforts.

7. Experienced educators new to linking agent roles will require substantial re-education, touching on cognitive and affective areas in addition to behavioral skill development.

OUTLINE OF THE ARTICLE

The first section has set the stage and presented the assumptions underlying the paper. The second section, "The Universe of the Linking Agent," consists of four principal subsections. The first presents three major perspectives on the current practice of linking agentry; the second addresses the nature of the resource systems and the common sources and attributes of the innovations that are typically the nucleus of program improvement efforts. The third subsection discusses the client system as a complex social system and as an organization subject to a multitude of influences, and the final subsection deals with the host agency responsible for supporting the many needs of Linking Agents they house. The third section on "The Linking Agent -- A Specialized Generalist," deals in depth with the Linking Agent proper. The many dimensions of this multi-faceted creature are articulated and illustrated, the multiple roles to be played are described, attributes and skill clusters associated with the multiple roles are presented, and the question of selection versus education versus training is touched on. The last section presents a summary and argues for a world-view emphasizing systematic problem-solving as a means of focusing future efforts.

THE UNIVERSE OF THE LINKING AGENT

Linking agents are involved on a little understood constellation -- the educational and R&D community -- which is itself part of a larger and more complex universe. Within this constellation, collections of individuals, as well as individual linking agents, are affected by other influences. While the object of primary interest in this paper is the linking agent, a brief inspection of the major influences and of the other entities should help us understand the sort of nebulae the linking agent inhabits. In this section, several issues about the major influences, the resource system, the client system, and the host agency will be presented to facilitate a later full consideration of the linking agent.

THREE MAJOR PERSPECTIVES ON CURRENT PRACTICE

The different opinions about what constitutes an effective linking agent reflect the different orientations possessed by those actively engaged in studying, recruiting, or training linking agents. From my vantage point, three major perspectives are presently intermingled in the field -- those reflecting the behavioral science tradition, the information science tradition, and the curriculum theory tradition.

Historically, the notion of a linking agent role followed from an emphasis in the last decade on improved dissemination of information. The study of communication channels, how information flows from person to person and structure to structure is the basis for the work of the Far West Lab's Educational Information Consultant (EIC) program and much of Havelock's early work. The old National Center for Educational Communications, which housed the ERIC system, sponsored many important early inquiries by Paisley and others. This view is presently reflected in efforts of the Information and Communication Division of NIE to establish a capacity in each of the fifty states for more effective dissemination and utilization of information.

The influence of the information science school in the public education arena is manifest in the variety of information centers which can access a myriad of data bases via computer in response to educators' inquiries. The most prominent of the comprehensive information centers are R.I.S.E. (Research and Information Services in Education) in King of Prussia, Pennsylvania, and E.R.C. (Educational Resources Center) at ACES in New Haven, Connecticut, in the East; and Northern Colorado BOCES in Longmont, Colorado, and California-based SMERC (San Mateo Educational Resources Center) in the West. Our own NETWORK/NaLDAP Information Resources Center is an example of a

specialized center serving a restricted clientele (i.e., Learning Disabilities Demonstration Centers) in contrast to the general service offered by the comprehensive centers.

ERIC remains a prominent, and increasingly useful, element in an information center's resource arsenal, complemented in more sophisticated centers by "fugitive" data collected from local services or not available through computer access. In their interactions with school people, specialists with an information science orientation strive to improve the quality of decisions by concentrating on what goes into them. They hope that the array of alternative inputs presented in response to a focused request will be carefully considered and a more rational sequence followed by the decision maker(s). However, the nature of their relationships with clients typically precludes involvement in the dynamic processes surrounding a particular decision. Rather, transactions are discrete events, e.g., the request, "I need to make a presentation to my board on alternatives to closing schools," leads to the preparation of an information package sent to the client, presumably used in some way with the board. How the information is considered and its effects are rarely ascertained. It is unlikely that a client would request or that a person in an information center would maintain ongoing interaction during the many cyclings of deciding, trying out, revising, deciding, et cetera, involved in instituting a significant new practice or policy.

In contrast, the concerns of the behavioral science school, exemplified by OD efforts grounded in the social psychology of individuals, groups, and organizations, attend more to the process itself. Practitioners in this school emphasize human interactions and relationships, and advocate employing consensual means to make better decisions through active collaboration during implementation and by confronting and working through the inevitable difficulties that arise in the course of instituting any significant change into an otherwise stable system. Kurt Lewin is the grandfather of this tradition, with Miles, Jung (former director of Northwest Lab's Increasing Teacher Competencies Program), Lippitt and his associates in Michigan, and Schmuck and Runkel in Oregon as exemplary contemporary practitioners of this approach. Schmuck and Runkel's "Strategies of Organizational Change" program at the Center for Educational Policy and Management (CEPM) located at the University of Oregon is one of the few efforts which integrate action interventions in schools with ongoing research into the processes involved. (The program in Educational Administration at the State University of New York at Buffalo is another.) The "Strategies" program has made many solid contributions to understanding what actually goes on, and with what effects, when conscious efforts are mounted to improve schools' organizational functioning. (See Runkel and Schmuck 1974; and Runkel et al, 1974, for detailed descriptions of their efforts.)

Lastly, there is a school which one might label the curriculum theorists. Their interests do not preclude attention to matters of concern to the foregoing two schools, but they pay more explicit attention to content as traditionally defined. Tyler is generally acknowledged as the elder statesman of this school, and Goodlad at the University of California at Los Angeles has done much to bring greater clarity to it. More recent studies by Fullan and others (1975) continue this emphasis. The curriculum theory school is somewhat less visible in the current arena; there continue to be difficulties in defining curriculum as a field, and few of the current federally-sponsored program improvement efforts give it focus in the context of school-based change efforts. However, our experience at The NETWORK has shown that without careful attention to the curricular dimension, the probability of success of any change intervention is drastically reduced. Schools are just not prepared to deal with process issues alone, and since most schools see curriculum -- as opposed to communication/information flow or organizational processes -- as their primary responsibility, it seems essential that we incorporate this orientation into our thinking.

When one attempts to change or improve schools or school districts, these three orientations need to be synthesized. A "people" focus, which acknowledges the importance of curriculum, the place of information flow in improved decision-making, and the centrality of relationships and organizational influences is indicated. Such a focus reflects the emerging mainstream in the area of educational program improvement and should influence the design of training and support mechanisms for linking agents.

It is also essential that we focus on the overall process associated with effecting significant changes in human systems, whether the change be the adoption of a new curricular program or a new way of thinking about one's self and one's work. We need not only to study the initial stages of awareness and interest-arousal but also to look more fully at the dynamics of the implementation process. Developing this broad, long-range perspective should be a priority for linking agents concerned with program and system improvement. Further, we need to deal with here-and-now problems in schools and to challenge schools to go beyond the present by developing improved capacity to cope with the anticipated and unanticipated problems that will confront them in the future.

THE RESOURCE SYSTEM

Types of Resources Available to the Linking Agent. The world of knowledge production and utilization (KPU) is an exceptionally complex one, as Culbertson has noted in "Linking Agents and the Sources and Uses of Knowledge." It is inhabited by all sorts of individuals, agencies, ideas, programs, products of varying tangibility, visibility, and utility to the educational practitioner. Bringing this maze of potential resources into

focus and relating them to a particular school's problem so that the resources can be effectively utilized is the principal challenge facing linking agents. As intermediaries between resources and clients, their skills in resource utilization are what distinguish them from other competent professionals. (This central skill of resource utilization and other required skills are discussed in greater detail subsequently.)

Our concern here then is to focus on the notion of "the resource system" -- its general parameters, its principal elements, and their relative importance to linking agents. A classification scheme which has considerable heuristic utility is presented in Figure 1. Adapted from the report of the Dissemination Analysis Group (DAG) convened by the Office of the Assistant Secretary for Education, it represents the results of long deliberation by a highly qualified and diverse group.

The question they grappled with was, "What is to be disseminated?" Restated in the context of this paper, "What is the 'stuff,' that is, the resources, of the transactions between linking agents and their clients?" The excerpt from their report, with minor editorial clarifications (below), explains the following figure:

FIGURE 1
A CONCEPTUAL MAPPING OF EDUCATIONAL PRODUCTS, PROGRAMS, PRACTICES, KNOWLEDGE AND INFORMATION

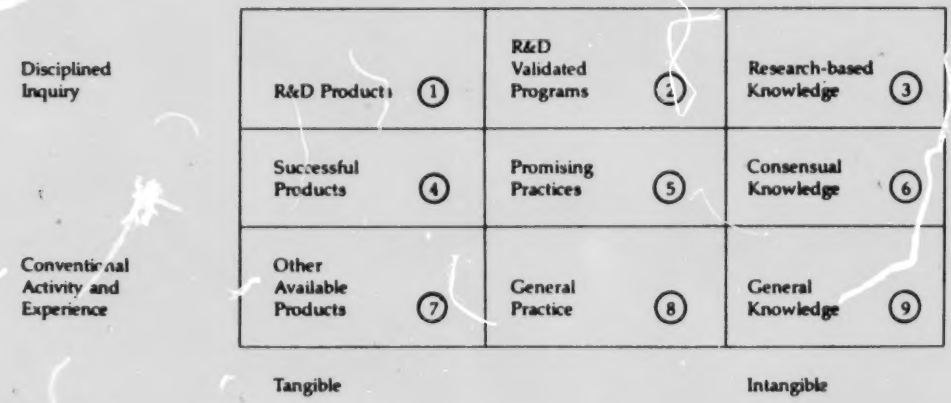


Figure 1 presents a schematic display of the types of "disseminates" considered by the DAG, arrayed along two dimensions: degree of tangibility, independence, and separability; and the degree of disciplined inquiry on which they are based.

Beginning at the top left (Cell 1) are the tangible products of research and development (R&D). Progressing to the right the R&D products shade into R&D-based or -validated programs. As these programs become increasingly intangible, they shade into "synthesized" (practice oriented) research-based knowledge (Cell 3), and then finally into highly intangible, abstract, and generalized knowledge (off the chart). Proceeding across the next row (Cells 4-6), the same kinds of content are encountered; however, the "validity" of the content at this second level is based far less on the R&D (disciplined inquiry) process and far more on pragmatism. Successful products are usually those that are marketable, profitable, and able to win and maintain consumer acceptance. Promising practices may be purely practitioner innovations that have neither an R&D base nor evaluation data to prove their claims, but that are judged to be promising or worthy by competent educators. Consensual knowledge is not produced by disciplined inquiry or scholarship, but is accepted as valid and reliable by those who must rely on it.

In the last row (Cells 7-9) is encountered a vast "grey" area of relatively invalidated products, practices, and knowledge. Their validity depends primarily on the prevalence of their use and on their utility for specific users. Credibility and utility are the operating criteria to separate the useful from the useless.

Depending on the type of resource needed (i.e., which cell of Figure 1), linking agents will turn to individuals or agencies/organizations/systems for tangible products or artifacts (i.e., an information package) or for less tangible practices or ideas. Thus, linking agents need to be aware of, to know how to access, and to use the full array depending on a particular client situation.

Sources of Products and Programs for the Linking Agent. The traditional information linker was concerned principally, if not exclusively, with attempting to increase the use of "research-based knowledge" (Figure 1, Cell 3), primarily that available through ERIC. While undoubtedly there have been, and still are, linkers who maintain such a tight focus, the changing nature (and improved quality and utility) of the ERIC data base combined with expanded demands flowing from continued contact with school people leads inevitably to linkers taking a broader "practice" focus.

Earlier our experience with the centrality of curriculum in our own dealings with school people was noted. The bulk of their curriculum is shaped by the consideration and use of tangible resources (program and products) as opposed to intangible resources (research knowledge and other information). This reality suggests these resource types be treated in a bit more detail to ensure clarity.

The vast majority of curricula in use in the schools today are produced by commercial publishers (Figure 1, Cells 4 and 7). Since most linking agents will strive to create awareness and increase the use of programs developed by local and federal sources, at first it might appear irrelevant to examine the activities of those who promote commercial products, yet the success of commercial publishers demands such an examination. For the linking agent, the feature of the commercial sector to be kept in mind is its concern with the efficient, profitable distribution of a high volume of products, rather than the successful implementation of programs. Analyses of clients probe those factors that will affect the positive decision to adopt a particular product in sufficient quantity to justify the producers' investment in advertising and other marketing. This is not to say that commercial programs are of low quality. Indeed, many individuals engaged in systematic research and development also contribute to commercial products of many kinds.

Commercial publishers need enough knowledge of the marketplace and the consumer group to be sure that the products they are promoting have acceptability and credibility. They use salespersons very effectively and have led the way in utilizing modern technology for segmenting and saturating markets. Typically, their textbooks are formatted in a way that makes it easy for the salesperson to respond to questions from potential adopters by simply flipping to an appropriate chapter subheading and saying, "Here you'll see that we cover dangling participles very adequately." Experience with more complex products, such as the Far West Lab's Minicourses, has demonstrated the difficulties of educating textbook salespersons to promote products which depart radically from the norms of schools, which require considerable supplementary equipment, and which do not yield a premium commission for the salespersons. (See Turnbull et al, 1975, for a more detailed discussion of this case.)

The commercial sector cannot deal with "thin market" materials, that is, those which do not yield high enough revenues to warrant the investment in marketing. However, there is much to learn from commercial successes, and recent studies of the utility of the marketing approach are worthy of review by interested linking agents (see in particular Engel et al, 1975; Kotler, 1975; Sikorski and Hutchins, 1974).

The second source of programs, of greater concern to the linking agent, is that of "R&D outcomes." At the present time there is considerable debate as to just what constitutes an R&D outcome and enough vacillation exhibited so that a rather broad definition (i.e., incorporating Cells 1 and 2 of Figure 1) is one that would probably be useful for the linking agent to keep in mind. A Request for Proposal from NIE's School Practice and Service Division defined educational R&D outcomes as follows:

> Those curricula, products, skills, programs, instruments, teaching and management methods and techniques and the like that are produced

> by disciplined inquiry involving activities normally considered part of the R&D process such as conceptualizing, hypothesizing, model developing, field testing, data gathering and analyzing and evaluating. Evidence of effectiveness, judged according to professionally accepted standards, is also a hallmark of R&D outcomes.

This definition is useful in highlighting the importance of a systematic process ending in some demonstration of effectiveness. In some cases, programs developed by school-based educators conform to this definition and are able to offer evidence of effectiveness to a quality control panel such as the Joint Dissemination Review Panel (JDRP). The JDRP serves the Education Division as a vehicle whereby programs which individual project officers feel are worthy are reviewed by a panel of experts. Of some 250 projects which have been submitted to the panel since its inception, 60% have been approved. Despite a number of flaws now receiving attention by its members and the field, the JDRP is likely to remain the principal means for formal validation by the federal government. It will continue to serve as a necessary hurdle for programs expecting federal support for dissemination activities. While the vast majority of programs which have been submitted to date are those initiated by ESEA Title III, recent efforts have brought before the panel for consideration a variety of programs initially funded by Title I, Bureau of Education for the Handicapped, Bilingual Education, and NIE. This broadening base bodes well for the creation of a more widely respresentative pool of programs which have withstood the scrutiny of hard-nosed professionals. Educational Programs That Work (1979), a catalogue produced by Far West Lab for the National Diffusion Network, describes all programs approved by the JDRP. The output of directly-sponsored federal R&D is detailed in the two volume NIE product Catalogue (1975).

Lastly, there are locally-developed programs (Figure 1, Cell 5) created in response to idiosyncratic local needs. One serious shortcoming of most of these programs, whether sponsored by federal or state money or simply the result of local invention, appears to be the absence of a meaningful evaluation and documentation effort. Such efforts would allow objective judgment as to both the effectiveness of such programs in their original sites and their utility for other settings. Because the motivation for most of these projects is amelioration of a particular local problem, not the creation of an entity which contributes to the greater good, this shortcoming is not surprising.

Some interesting findings about the nature of such exemplary practices and the difficulties in transporting them from one site to the other are discussed by Turnbull et al, (1975). One promising development was the effort by Title III (now Title

IV-C) through its Identification, Validation, and Dissemination (IVD) process which encourages state agencies to establish procedures whereby locally-developed projects supported by federal money can be reviewed by an external team using a common set of guidelines (see Sharing Educational Success: A Handbook for Validation of Educational Practices). Though rather expensive for the project, the on-site evaluation team mode promoted by the IVD process offers an alternative to simply relying on informal evaluation procedures and generally incomplete measurements of outcomes. While the IVD approach, like virtually all on-site inspections of complex programs, suffers budget and time constraints that produce a "five-blind-men-describing-an-elephant" phenonmenon, the professional judgment a panel of peers renders after comprehending the elephant offers clear -- if costly -- improvements over the written report of a single observer. Whether the payoffs are commensurate with the investment is a question in need of an answer. Individual states have produced various compendia of state-developed and -validated programs which may be of interest to linking agents.

Viewing Resources as Innovations. A recent insight which has added clarity to the writer's thinking about the difficulties of mounting and managing program improvement efforts in schools is the realization that all potential (i.e., currently unused) resources are innovations from the clients' perspective and hence represent something new to them. Historically innovations in education have been thought of simply as products and practices. Diffusion researchers (Miles, 1964; Rogers, 1962; Rogers and Shoemakers, 1971) have pushed and probed the phenomena relating to their introduction into an adopting unit. Inquiries into the realities faced by human innovations, "information linkers" whose role was initially patterned after the agricultural extension agent, have been sponsored (Mick, Paisley, et al, 1973; Sieber, Seashore, et al, 1972). Increasing attention has been focused on the dymnamics of the adopting unit and the individuals who populate it (Bennis, Benne, and Chin, 1961, 1969, and 1976; Havelock, 1973; Lippitt, Watson, and Westley, 1958; Schmuck and Miles, 1971). All these inquiries have enriched our still incomplete understanding of the complex of things, people, and perceptions which can be innovations and of what it takes to bring about change, of whatever magnitude, personal, programmatic, or organizational -- in human systems (e.g., schools).

For the present discussion, let us acknowledge that all resources arrayed in Figure 1, and their many sources and potential delivery modes, are innovations for clients which range from the seemingly concrete and simple (a new textbook or product), to the exceedingly intangible (the idea of using someone else as a resource, and the act of initiating and maintaining the relationship). It's all new, it's scary, and it all happens simultaneously -- at multiple points on the

tangible-intangible dimension (see Figure 1) -- when a teacher decides to risk by exploring a new product/practice/idea or by adopting one.

Now, add to this already complex equation the newest, strangest resource/innovation of all, "the linking agent." Linking agents (the idea of them and the use of them) represent an even larger innovation than the programs or ideas to which they hope to link the system. Few, if any, clients know how to use any kind of helper effectively (other than to advance their own image as "innovators"), and many new linking agents are sufficiently unsteady themselves that they do not acknowledge explicitly this gap with their clients.

Perceived Attributes of Innovations. Having introduced the perspective of viewing all new resources as innovations, let us turn to the innovation itself. If linking agents are to be effective, they must understand the many facets of an innovation as perceived by the potential adopter/consumer/client/user. (The reader interested in an in-depth treatment of the importance of the user's perspective on the innovative process should see Fullan, 1972.) The topic shall be touched so that the individual linking agent can pursue elsewhere those facets of greatest relevance.

There is little disagreement in the field that the attributes of an innovation as perceived by the potential user interact with the user's view of the setting to affect the rate and extent of adoption. (A parallel phenomenon is the effect of the linking agent's perceptions of the innovation and the setting on adoption.) Rogers and Shoemaker (1971) identify the attributes of interest as relative advantage, compatibility, complexity, trialability, and observability. All but complexity are reported as positively related to the rate of adoption by the majority of the studies reported. A somewhat more detailed consideration of attributes and their effect on the innovation process is provided by Zaltman et al, (1973). Nineteen attributes of innovations are discussed including such familiar notions as cost, relative advantage, and compatibility and some unfamiliar notions such as terminality, the number of points in time and the space between them, beyond which the adoption of an innovation becomes less rewarding; status quo ante, the cost or difficulty which must be risked relative to the reversibility of the innovation or return to the prior status quo; and gateway capacity, the extent to which the adoption of an innovation opens avenues to other (desired) innovations. Further, they suggest probable interaction of these perceived attributes with different substages of the innovation process, which they see as a series of five decision stages from initial knowledge to sustained implementation. The discussion is summarized in Figure 2.

Arraying them in this fashion clearly demonstrates the juggling act required of the linking agent. Different attributes are

FIGURE 2
PROBABLE INTERACTION OF ATTRIBUTES WITH INNOVATION PROCESS SUBSTAGES

Attributes of Innovations	Decision Stages				
	Knowledge	Attitude Formation	Decision	Initial Implementation	Sustained Implementation
Cost		X	X		
Returns to investment		X			
Efficiency		X			
Risk and uncertainty		X			
Communicability	X				
Compatibility		X			
Complexity		X			
Scientific status			X		
Perceived relative advantage			X		
Point of origin	X				
Terminality				X	
Status quo ante		X			
Commitment			X		
Interpersonal relationships				X	
Public versus private				X	
Gatekeeper	X				
Susceptibility to successive modification					X
Gateway capacity					X
Gateway innovation					X

Reprinted by permission of the publisher from G. Zaltman, R. Duncan, and J. Holbek, *Innovations and Organizations*. New York: John Wiley and Sons, 1973, p. 164. © 1973 by John Wiley and Sons.

going to affect the user's views at different times, and it may not always be clear at what point in time one is. It is unlikely that a given innovation process will proceed through only one series of decision stages; further, the attributes may interact across substages. The authors acknowledge this: the "x's" are intended to show their best guess as to that substage where a particular attribute is most likely to have significant interaction. Thus, they would suggest that as the dynamics of an initial (adoption) decision become crystallized into a public declaration of intent, the attributes of cost, scientific status, relative advantage, and commitment become dominant. It seems reasonable to believe that all those attributes which interacted with prior substages are still floating around somewhere as well, only that their power as filters or screens has diminished at this point in the process.

Further, it is likely that the language researchers employ in classifying attributes will not be meaningful to users, so

linking agents may need to create lists of attributes using local descriptors and definitions which would differ from site to site. To quote Zaltman, "the particular problem and proposed solution(s), the nature of the organization, and the general context in which change is to occur are all factors in determining which particular attributes are most salient at various substages. The important point is that the various attributes of innovations should be considered in light of the substages in which they are likely to be most important" (p. 165). Worthy of particular note in light of the findings reported by Rogers and Shoemaker regarding the negative relationship of complexity to rate of adoption is the distinction between the perceived complexity of the innovation on the idea dimension versus its complexity in implementation. Thus, a given program may be difficult to understand but easy to use or conversely, easy to understand but extremely difficult to implement. An example of the latter are the programs described in the Overview of Project Information Packages (1976), whose underlying ideas, at least those related to the curriculum, are rather conventional and quite compatible with the current practice. The difficulty comes when the other features of the program required for complete implementation and their likely effect on current practices are fully understood. Full-scale, faithful implementation of one of these programs is an exceedingly complex process; calling for different decision-making modes, staffing arrangements, space reallocation, and so on -- moves that are likely to bump up against the status quo in most districts.

The foregoing paragraphs deal with a single innovation and with the myriad attributes that play some unpredictable part in its acceptance and ultimate adoption by a school, whether facilitated by linking agents or not. For most of the endeavors in which linking agents will be engaged, the problems are even greater, since there is more than one innovation being introduced simultaneously. Typically this multiple-innovation phenomenon is unacknowledged in the literature; one is faced with a figure and ground problem where the curricular innovation is emphasized to the exclusion of other features of the process. Depsite its centrality in the minds of clients, it is just one of the innovations with which they are confronted.

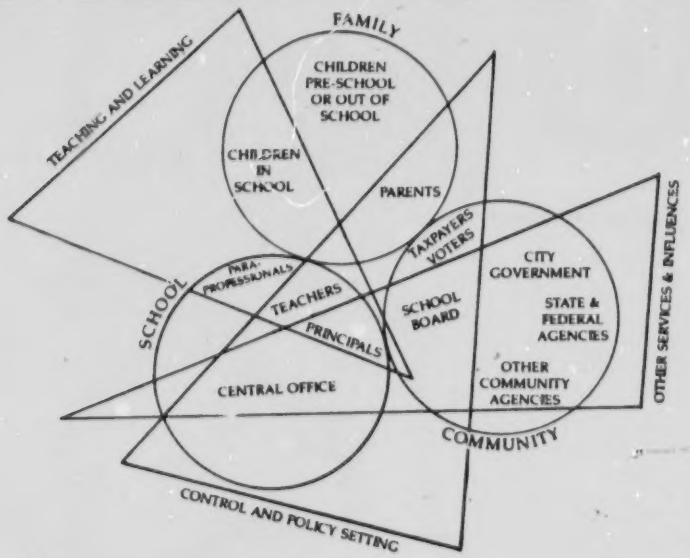
In conclusion, it should be obvious that a prime requirement for linking agents is not only greater understanding of the tangible resources which they will be called upon to bring to clients or themselves but also increased skill in comprehending and coping with the motivations, operating assumptions, and preferred styles of interaction of those in the resource system. The simplistic view that an innovation is a textbook should be laid to rest. The linking agent's task as the intermediary playing a translation role relative to potential resources is vastly complicated by the multiple-innovation phenomenon. The factors noted above are but one part of the universe with which linking agents will interact, and these factors are in dynamic tension

with the features of the client system itself, the subject of the following subsection.

THE CLIENT SYSTEM

Moving now to the next level closer to the linking agent, we turn to a view of the client system. Lieberman (1977), in "Linking Processes in Educational Change," discusses in detail the school as a social system and presents a series of understandings derived from her work in many schools. In this section, I shall illustrate the complexity of the school culture and its subcomponents; my purpose is to stress the need for linking agents to comprehend the multiple facets of their client systems. As Sarason (1971) states, "Those responsible for introducing change into the school culture tend to have no clear conception or the complexity of the process." Figure 3, "Educational Linkage of Sub-systems within the School Culture" presents one rather elementary perspective on the nature of the beast. It arrays three principal subcomponents relative to the school culture: SCHOOL, FAMILY, and COMMUNITY and their relationship to three functions provided by the formal education system: Teaching and Learning, Control and Policy-Setting, and Other Services and influences.

FIGURE 3
EDUCATIONAL LINKAGE OF SUBSYSTEMS WITHIN THE SCHOOL CULTURE



The figure illustrates that members of the various subcomponents participate in determining or influencing the major functions of education in ways that need to be acknowledged by outsiders

attempting to alter the status quo. Further, it suggests that the relative centrality of particular role groups in influencing certain functions varies. Only the principal is potentially involved in all three functions of the educational enterprise. (This analysis is predicated in large part on our own experience and is not intended to disregard the possibility that in states or districts organized differently, the superintendent might be at the crucial intersect of all the relevant functions.) The point to be understood is that the interests of the various constituencies within the larger school culture will be affected by any change intervention regardless of its origin.

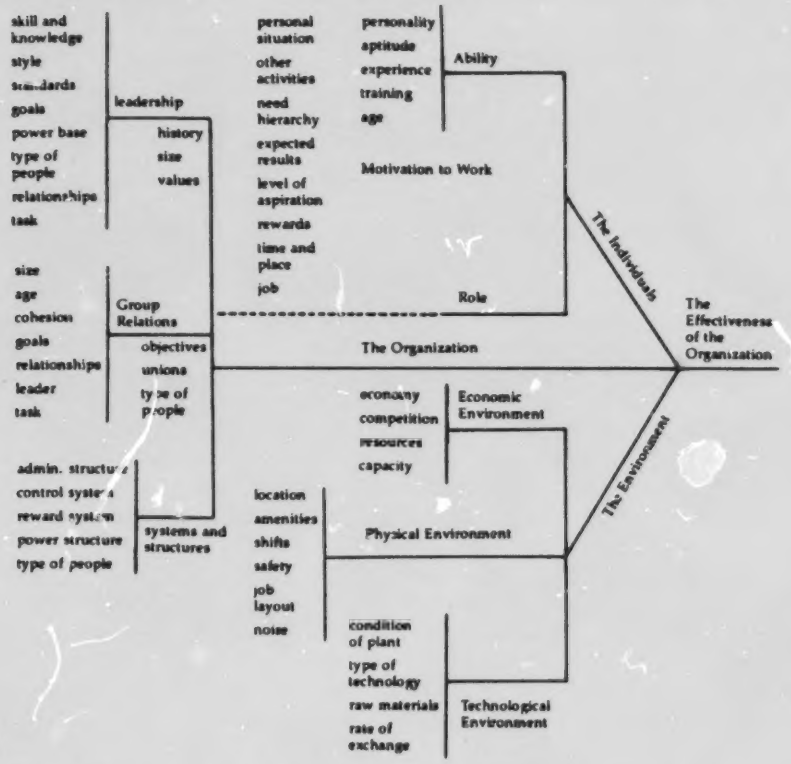
As has been noted previously, several strands must be synthesized when assessing the functioning of schools. As Miles (1964) among others has observed, and as the field agents in the Pilot State Dissemination Program quickly discovered, educators are not farmers acting as individuals with autonomy to make decisions based solely on reliable information. The decision-making process for educators is substantially more complex, given the organizational setting within which they work. In schools, once a decision to adopt an innovation has been made, complex organizational forces begin acting on that decision. These forces require the use of new knowledge and skills, lead to the alteration of communication patterns and interpersonal relationships, and generally threaten the orgnizational status quo. In this environment, diffusion theory is necessary but not sufficient to manage a planned effort. Knowledge of organizational dynamics is essential.

The pay-off to such an understanding, according to Handy (1976) is "to substitute a coherent set of conceptual frameworks... for collections of assumptions." He states that "...these concepts, properly used and understood, should:

> Help one to explain the Past which in turn
> Helps one to understand the Present and thus
> to predict the Future which leads to
> More influence over future events and
> Less disturbance from the Unexpected."
>
> (Handy, 1976, p.14)

If one were able to reach the state of awareness suggested by the foregoing statements, one could hardly ask for more return on one's investment. Getting a bead on schools as organizations is not a simple task. The literature specifically related to schools as organizations is rather limited, although this deficit is being made up (see Baldridge and Deal, et al, 1975; Corwin, 1974; Giacquinta, 1973). But if the linking agent is going to attend to more than the superficial aspects of change and to work to achieve increased organizational effectiveness with his school clients, this broader perspective must be acquired. Handy (1976) illustrates the multitude of factors that need to be taken into account (or consciously put aside) in Figure 4.

FIGURE 4
SOME FACTORS AFFECTING ORGANIZATION EFFECTIVENESS



Reprinted by permission of the publisher from C. Handy, *Understanding Organizations*, p. 13, Harmondsworth, England: Penguin Books, 1976. © 1976 by Penguin Books.

The diagram suggests that the effectiveness of an organization is determined by factors related to the individuals within it interacting with its immediate and surrounding environment. Organization members' motivation to work is affected by the leadership available to them and their group relations, as well as their individual roles and ability. Similarly, an organization's systems and structure are affected by the physical, economic, and technological environments within which it operates. As noted in the diagram, clusters of subfactors underlie each of these principal factors.

Using this information as a means of examining schools requires minimal translation. The factors related to the individuals represent a familiar starting point; the environmental factors, especially the economic ones, have less obvious relevance in the context of the schools. Perhaps the reader can see the potential utility of such a view as a stepping-off point and can

attempt the translation. Additional stepping-off points can be drawn from mainstream organizational theory, which views organizations as open systems, receiving "inputs" from the environment, affecting or processing these inputs in some ways and returning "outputs" to the environment. (One more radical perspective articulated by Pondy (1976a) in "Beyond Open System Models of Organization," may have special relevance for linking agents and others who find each school with which they must somehow establish a productive symbiotic relationship a unique reality constructed of the perceptions of the school's inhabitants. See also Greenfield, 1973, 1974 for more on a phenomenological perspective.) Schools as organizations are marked by differences in their degree of openness from level to level. For example, their boundaries are relatively permeable to people who come into the schools, are affected by them, and leave them with predictable regularity.

However, most observers believe that schools do not have the same degree of openness to new ideas or practices. Zaltman, et al (1973), posited that schools typically resist innovation because of force of habit, because of primacy (it worked well the first time so we'll continue doing it this way), and because of the lack of needed peer support.

This lack of openness to new practices is understandable, given the organizational characteristics of schools. Miles (1975) noted rather strict role differentiation between teachers, a situation which resulted in their serving in specialized capacities, traditionally doing little but teaching and unable to generalize to or adapt to new functions (e.g., that of curriculum selector, program developer, or evaluator). The lack of clarity of educational goals further serves to inhibit new programs, coherent evaluation of teacher performance, and planning for the future.

According to Pincus (1974), schools have traditionally resisted change and present self-perpetrating bureaucracies with a de facto monopoly on their constituencies. They are subject to the shifting desires of school boards whose membership and philosophy can change with frightening frequency. Schools are increasingly given the responsibility but not the wherewithal to solve social problems, i.e., the teaching of moral values, in addition to their fundamental mission of teaching basic skills. Teachers have a quasi-professional attitude, and it is virtually impossible to determine what actually constitutes a good teacher (Sieber, 1975). The coordination and control mechanisms of schools seem, on the one hand, to produce ease of introduction of an innovation, but produce difficulty during the implementation phase (Sieber, 1975; Zaltman, 1973).

Despite the complexities, and this not particularly optimistic picture, change is obviously taking place although it is snail-like. If the factors of vulnerability, diffuseness, quasi-professionalism, and structural looseness cited by Sieber

(1975) are acknowledged and accounted for when change programs are designed, then there is much greater promise than might appear at first glance. Further, that change agent's bugaboo, the "resistance to change" teachers supposedly display, may be a very sensible response, given their perceptions of reality.

Giacquinta (1975) views this perplexing problem as one of risking status. There is certainly a fair amount of uncertainty surrounding most innovations, and it is reasonable to expect individuals to want to minimize the uncertainty and reduce their risk. This phenomenon seems related to what Toffler (1970) sees as a need for "stability zones" in one's life and the "mutual adaptation" noted in the Rand Change Agent studies. Certainly some reshaping must occur in order for feelings of ownership to be developed, but it seems desirable to go beyond simple acceptance of this to understand why such adaptation might be necessary reshaping. Giacquinta's explanation is instructive:

> The change literature on school reform is committed to the notion that participation of subordinates is central to the success of an innovative effort. It is usually argued this is critical because it leads to commitment or a satisfaction of our democratic sensibilities. The status risk framework offers another explanation: participation acts as an extinguisher of uncertainty and/or a suppressor of organizational members' estimation of risk. It does this through the mechanism of communication. (pp.112-113)

A provocative perspective on the power of language (communication) in a context parallel to that discussed by Giacquinta is present in "Leadership as a Language Game" by Louis Pondy (1976b).

The foregoing discussion about client systems and their complexities, the multitude of factors which need to be accounted for and delimited before any manageable effort can be mounted, could be extended by analogy to the organizations within which linking agents are housed. Of course, in one's own house the linking agent is the insider, not the outsider, and thus the phenomena encountered are sometimes mirror images of those to be found in dealing with clients. Thus, while one may find one's clients responding openly and favorably to advice on increasing the amount of non-judgmental feedback between peers or principal and teachers, it may be quite a different story when one tries to offer advice on (and promote change in) similar practices with one's superior and co-workers.

THE HOST AGENCY

I turn briefly now to the function of the host agency within which the linking agent will be housed; most linkers will be found in agencies external to their client systems. The

agencies will be state departments of education, intermediate units which may or may not be legally connected to state departments, R&D Labs and Centers, institutions of higher education, non-profit educational service agencies, and other school districts' R&D units, few though they may be. Most of these agencies do not or are unlikely to conceive of themselves self-consciously and primarily as "linking agencies" as we have at The NETWORK. And even if they did, the "care and feeding of linking agents" would be difficult to keep on the front burner as an organizational priority. (Our own difficulties in this regard undergird this conviction.)

Most agencies housing linking agents tend to think in terms of the agency's functions vis-a-vis their clients and do not look expressly at their expectations for the linking agents themselves. As has been illustrated, while linking agents may be primarily concerned with the client systems with which they are engaged, the reality of their host agency will affect their day-to-day functioning and ultimate effectiveness in major ways. Acknowledging that the reality of the host agency needs attention is a small but crucial first step. The importance of the host agency in developing and providing a support system for linking agents that will enhance both their short-term functioning and long-term effectiveness with clients and their personal satisfaction in their role should be understood.

Principal Problems Faced by Linking Agents Which Necessitate A Support System. The role of the linking agent, as noted by Farr (1971) and Havelock (1969), among others, is a marginal one. The role of the Pilot State field agents studied by Sieber et al, (1972) certainly verified that characterization. Owens (1970) stated the positive aspect of marginality by noting that the external agent "will never really be a part of the power structure but is privileged to raise questions, to suggest procedures, and to generally facilitate the operations of the group more candidly and objectively than if he/she were an insider." But marginality carries with it certain disadvantages. Working externally to the organization, a linking agent's socio-emotional needs for inclusion, identity, feedback, and influence cannot be fully met within the system without jeopardizing the agent's effectiveness. External linking agents who relinquish their marginality also lose much of their potential for impact upon the system, so it is essential for the linking agent to maintain a posture of "functional neutrality" to best serve the long-term interests of the relationship.

Thus, the responsibility for meeting the linking agent's needs must fall to his/her host agency. Linking agents obviously need to be provided with the basic amenities, but with their potentially specialized jobs, they also need certain atypical resources. After adequate housing, heat, light, paper, and pencils, the linking agent needs access to a professional library of substantial proportions and the ERIC data-base -- if

at all possible. This last requirement does not need to be through a computer, although access to a terminal is certainly desirable. Beyond these resources, the linking agent needs an array of collegial supports. Many of them can be provided with the host organization, others will require reaching outside. Some of the external connections will be formal, as in professional associations such as AERA, ASCD, The OD Network, ASTD, Phi Delta Kappa, ASIS, etc.[1]

Working in teams will often minimize some of the day-to-day difficulties experienced by linking agents, but it is usually an expensive practice not easily instituted in any but the most well-financed situations, (not a characteristic of most educational service organizations). A less expensive method is to develop in-house support teams, the members of which need not have the same role as the linking agent. They need not be working with the same type of client or the same sort of problem to be an effective sounding board and "crying towel" for the individual member. Through our experience at The NETWORK, triads work relatively well and avoid one-to-one deadlocks. The support groups can arrange to convene on a scheduled basis or on a functional basis around critical incidents that emerge during their individual activities. In the case of geographically dispersed enterprises, it is conceivable that some (low level) support can be provided long distance, facilitated by contemporary technology, e.g., telephone, telecopier, computer terminals, and the like, once relationships are well-established.

Linking agents also need relief from overload. Havelock (1969) classifies the overload problems as those related to number, complexity, and difficulty. It is easy, and subsequent sections of this paper will display this in even starker detail, for linking agents to be viewed by one and all as persons capable of being all things to all people. Given the range of clients with whom they are likely to work, linking agents are confronted with the problem of wearing many hats, some of them simultaneously. Complex linking agent roles magnify overload. Even at the beginning, the mere changing of one's current role to that of linking agent may produce a psychic overload.

Havelock and Havelock in Training for Change Agents (1973) argue for "whole role training" as opposed to an emphasis on skill sets for functions and stress the importance for extensive support within the host agency. Training for new roles is far more difficult than training for specific skills or functions...a whole new identity needs to be developed. Also, if whole role training is to be meaningful, it must be coupled with extensive institutional support arrangements in the back home situation. If the training is to "stick," the returning change agent must be officially and informally accepted in the new role by his/her superiors, peers, and subordinates. (p. 41)

But it is unlikely that many linking agents will be able to take on one or more roles as their exclusive domain. The best that

can be hoped for is that one or more linking agent roles will become dominant segments of an individual's conscious concept of "My Job." Individuals taking on linking agent roles need to see those roles as relatively compatible with their concept of "self" as well as with their concept of other roles that they play, be they societal roles -- spouse, parent, child, or professional roles -- program monitor, author, advisor. Pareek (1976) suggests mapping all the relevant roles and their distance relative to on another, thereby constructing a "role-space-map."

It should be apparent that conflict of some sort is likely to emerge from such analysis. Pareek identifies four typical role-space conflicts: self-role distance, intra-role distance, role-growth stress, and inter-role conflict. He further suggests we attend to "role-set" conflicts which emerge from the relative proximity of one's central role to the perceived roles of relevant or significant others. A role-set map can be created just as can a role-space map. Typical role-set conflicts are role ambiguity, role overload, role-role distance, and role erosion.

The relevance of these notions to a host agency's support of the linking agents it houses should be obvious. Linking agents will invariably face ongoing problems of marginality (role-role distance) with both their clients and their colleagues. They may suffer from a sizable gap between their various professional roles or their concept of self. It is the host agency's reponsibility to build in support mechanisms which lead to increasing role linkage, defined as a relatively small perceived gap between one's own role and that of others and of self. Pareek suggests, in Figure 5 below, a number of coping strategies which can be employed to handle the inevitable role conflict.

FIGURE 5
TWO TYPES OF COPING STRATEGIES

Role Conflict	Avoidance: Dysfunctional, Degenerating Strategies	Confrontation: Functional Regenerating Strategies
Role-Space Conflicts		
1. Self-role Distance	Self Role Rejection	Role Integration
2. Intrarole Conflict	Role Shrinkage	Role Linkage, Creativity
3. Role-Growth Stress	Role Fixation	Role Transition
4. Interrole Conflict	Role Elimination and Rationalization	Role Negotiation
Role-Set Conflicts		
1. Role Ambiguity	Role Prescription and Role Taking	Role Clarification and Role Making
2. Role Overload	Prioritization	Role Slimming
3. Role-Role Distance	Role Boundness (Efficient Isolation)	Role Negotiation
4. Role Erosion	Fight for Rights and Rules	Role Enrichment

From Interrole Exploration by Udai Pareek. Reproduced from J. William Pfeiffer and John E. Jones (Eds.), *The 1976 Annual Handbook for Group Facilitators*. La Jolla, California: University Associates, 1976. Used with permission.

He goes on to outline briefly what might be termed a "creative blend" coping strategy labeled "Inter-role Exploration." It is characterized by:

1. Mutuality versus exclusiveness
2. Creativity versus conformity
3. Confrontation versus avoidance
4. Exploration versus expectation of ready-made solutions.

Such inter-role exploration would likely benefit from process assistance by a third party and is a useful extension of the technologies for role negotiation proposed by Harrison (1972) and role renegotiation proposed by Sherwood and Glidewell (1973).

In addition to these active stategies for coping with this inevitable role strain linking agents will face, support mechanisms can acknowledge the compensating benefits of "role accumulation" for which Sieber (1974a) has put forward a theory. In commenting on an early draft of this article, he noted that rewards such as "getting around and meeting lots of people, gaining prestige because of the many contacts that are made, availability of resources gained in one role for us in other roles, self growth...definitely accrued to the extension agents in the Pilot State program."

Our own experience over ten years is consistent with these observations. Recognizing these potential payoffs and building in ways to include them offers one of the most effective support strategies to enhance role satisfaction. Such rewards are one of the reasons people "put up with" the job of linking agent and love it. (Of course, you can burn out from an overabundance of pleasant, motivating stimuli, too.)

Linking agents, their managers and host agencies should recognize the many problems inherent in the linking agent role, actively and consciously should anticipate the inevitable conflicts, explicitly address them initially, and confront them in the course of work. At the minimum, doing so requires some sort of periodic reflection and analysis by relevant parties, and under optimal conditions, includes the use of some of the same strategies and tactics proposed for linking agents to use with their own clients, perhaps with the assistance of an outsider.

This brief discussion of the importance of a support structure for the functioning of a linking agent would not be complete wihout mentioning the need for professional development.

In-service training of professionals all too frequently bears an unhappy resemblance to the adoption of innovations, with much attention at the front end and little or no attention after the intial training is provided. Professional development in the form of formal learning through college courses, access to the ideas of others through the literature, participation in training workshops and other short-term professional growth opportunities, sponsorship and legitimization at professional organization conferences, and "annual celebrations," are all a vital part of the support needed by linking agents. It is becoming increasingly probable that the number of linking agents will increase, and it is reasonable to hope that some of the formal and informal networking which has characterized other phenomena of equal vitality, e.g., the teacher center movement, will be used with linking agents. Further, it is possible and necessary to organize a training program which specifies free-standing clusters of skills to be developed, as well as an integrative framework which allows the clusters to be melded into dynamic roles for individual linkers. The section which follows attempts to provide an initial blueprint for doing so.

THE LINKING AGENT – A SPECIALIZED GENERALIST

As we focus on the individual linking agent, it is well to remember that we are talking about an abstraction. There is certainly no idealized type of linking agent on which everyone could agree. The linking agent is commonly thought of as an amalgam of the information linker described by Farr (1971) and of the change agent discussed by Havelock and others in the general literature of change. Havelock, whose linkage model synthesized the dominant approaches to educational program improvement in the late 1960's, outlines at least four different roles -- those of catalyst, resource linker, process helper, and solution giver. At no point, even in some of our own writings, has the term "linking agent" been accorded any operational definition. A broad description that can accommodate a range of particular roles is:

> A linking agent is an individual who helps others engaged in problem-solving by connecting them to appropriate resources.

This generic description is deliberately broad; on balance such breadth is an asset rather than a liability. Other terms which could be applied -- change agent, program improvement specialist, human relations specialist -- risk negative connotation on the part of the potential client. Linking agents, on the other hand, carries almost no connotation one way or the other for most people, and that fact allows clients to focus on the actual behaviors of an individual linking agent. For that reason, the label linking agent is preferred although other modifiers are needed to facilitate examination of the training requirements of such individuals. In this section some of the common variants of the generic role will be described and a range of related issues will be explored.

Most observers of the current scene agree that the multitude of functions the complete linking agent could be called upon to perform require something of a super-person to execute. It seems to follow that one cannot talk in terms of single individuals but rather needs to consider teams or combinations of individuals. Indeed, the concept of the linking agency seems a fruitful avenue for exploration. In "Linking Processes in Educational Change," Lieberman has touched on the processes which may occur between linking agencies and client systems. Our own organization has been referred to as a linking agency since its inception. However, there seems little hope for the development and support of linking agencies over the next several years, given the state of the field. More specifically, I do not believe that sufficient "risk capital" will be available in the short-run (five years) at either the federal or state levels to plan and build brand new organizational entities

or convert existing entities, i.e., intermediate service agencies, into agencies which consciously and primarily view themselves as linking agencies. Such entities may expand their functions to include an array of linking functions and many are doing so with much promise. But there is no tradition in education, much less the technology required, of building organizations purposefully. With luck, there will be support for emergent units within "existing" agencies which have linking as their primary mission. Since these will be small at first, relatively few individuals will be involved in any given unit. Given this reality, it is highly probable and certainly realistic to expect renewed attention given to the creation and training of linking agents; so, the linking agent is treated as an individual in this section.

Those who work in this field tend to function on a daily basis largely on their own, even if they have a range of colleagues or consultants to assist them. Most training that is feasible economically and logistically is likely to be designed and conducted with a focus on individual participants, not on the total organization, even if the individuals are team members drawn from a single agency. The organizational support and resources clearly cannot be ignored, but focusing on the individual is more promising for our present purposes.

An array of "archetypal" roles can be used initially to provide a way of specifying narrower definitions and required skills for the roles will be outlined. The array in the following subsections represents personal conclusions drawn from observations of the current reality; each of the roles identified is one which I believe to exist in fact. None is as elusive as "Big Foot", all can be sighted easily, each can be adequately distinguished from the others. While acknowledging that a range of roles exists at the present time and will continue to exist in the future, we need to set out long-range sights on a somewhat "full" role. This "full" role would have linking agents armed with a full array of skills to be employed as needed by the particular client situation and relationship. However, a series of iterations will be necessary before we can point to anything approaching an army of full-scale linking agents at work around the country.

For the first iteration we should concentrate on recruiting and training generalists who, with ongoing support and continued training based on their own experiences, can play an increasingly broad range of roles as appropriate in a given situation. There are some who will choose (and this should be a conscious choice) to limit themselves. Fine, so long as there remain those committed to expanding their repertoire and so long as new recruits can be attracted while we continue to refine our vision.

Each of the roles has different features and different requirements. Planners and managers should refine their

selection procedures to better match potential linking agents with the roles they project they will hold and then begin to train them in a variety of skills, as well as in ways of matching the skills to individual client situations. The client who needs a lesson for Thursday's class won't be helped by a diagnosis of his/her organization, and linking agents need to develop skill in using the optimal combination of personal and other resources in diverse client situations. This necessity of responding to contingencies on an ad hoc basis argues for acknowledging that there is a range of acceptable role types which can be articulated and employed as organizers for training designs. Or the differential skill requirements for working through longterm relationships with various client systems can be used as organizers.

THE MULTIPLE ROLES OF THE LINKING AGENT AND THEIR DISTINGUISHING FEATURES.

As noted in the earlier discussion, the process of program improvement in schools is likely to involve the use of a variety of resources. When linking agents are involved in this process, they will find that they and the resources to which they can link the client, including themselves, will represent innovations with a variety of perceived attributes. Clients' perceptions of them and their resources may change in relative importance depending on what substage of the innovation process they are in. This innovation process and its substages, though it can be usefully presented and analyzed as a single linear sequence, is clearly not so straightforward in practice. Rather, an observer of the scene in a typical school would see some preliminary exploration, perhaps an early public decision to go forward, an initial flurry of activity, pauses, reverses, restarts, and so on. This dynamic cycling and recycling, the making and remaking of decisions, is the reality of change in human systems.

At the risk of being overly simplistic in light of this reality, and to make the presentation a bit more manageable, readers might think of the innovation (or program improvement) process as having a front-end and a back-end. Probably, observers of any setting where a planned effort is underway would reliably assign its relative progress to one sector or the other, and allow for the inevitable disagreement as to just where front-end shifts to back-end. For our purposes, readers need only accept the simple distinction between front-end and back-end as an heuristic device.

There are people now working in the field who concentrate their energies as linking agents on the front-end of the innovation process -- that concerned with creating initial awareness of resources (be they information, programs, people, or potentials), with provoking interest, assisting in some way (even if indirectly) in some kind of initial choice/decision which eliminates some options and sets the stage for the early

phase of any implementation efforts. In the pages which follow, five front-end roles will be described, and examples of their action-settings and principal strategies cited.

The five front-end roles are:

- The Product Peddler
- The Information Linker
- The Program Facilitator
- The Process Enabler
- The Provocateur/Doer

Similarly, there are five back-end roles which will be discussed. Linking agents playing these roles concentrate on the later stage of the program improvement process following some initial direction-setting decision (e.g., "Let's go with Program X," "Let's implement Program Y," "Let's pursue line-of-inquiry Z"). Generally described as the implementation → institutionalization phase, it has only recently received attention in the field. Nonetheless, readers will easily recognize themselves and their colleagues and perhaps will find this simple mapping helpful.

Linking agents who concentrate on the back-end of the process must deal with the messy cycling and recycling, starting and stopping, diverting and aborting which characterize most efforts to do something different in human systems, i.e., schools. I have labeled these roles as follows:

- The Resource Arranger
- The Information Linker
- The Technical Assister
- The Action Researcher/Data Feedbacker
- The Educateur/Capacity Builder

Let me stress that there are, can, and should be, single individuals who can play multiple linking agent roles, including special blends of the roles. They have been teased apart in this atomistic fashion in much the same way as the innovation process is segmented, so more bite-sized chunks can be inspected as a means of comprehending the gestalt.

Distinguishing Features. Before presenting the ten linking agent roles in more detail, several features will be presented to distinguish the roles one from the other. These features

will subsequently be related to each of the roles within the two (front-end/back-end) subsets. Later sections of the paper will present specific attributes and skills required of linking agents and apply them to each of the ten roles. First, the distinguishing features cast as questions:

Who does the diagnosis?

Who is the source of help?

What is being advocated?

What is the focus of the change effort?

What is the target of the change effort?

What is the degree of client targetedness?

What is the extent of emphasis on long-term problem-solving capability?

1. WHO DOES THE DIAGNOSIS? The extent to which the client is involved in the diagnosis of the problem situation is an early and crucial element in any program improvement effort. There is not a best answer to who should do the diagnosis in a given situation; rather, it is a function of the match among the client, the linking agent, and the particular situation. The various roles tend to represent a range on this dimension from total reliance on the client's assessment of the problem through some collaborative problem identification to a situation in which the linking agent alone makes the diagnosis. In the latter case, data provided by the client may be used but typically are not shared so much as answered by a particular solution. Thus, for purposes of distinguishing between the three points, they are client, joint, linking agent.

2. WHO IS THE SOURCE OF HELP? Related to the preceding discussion regarding the locus of the diagnosis is the question of the source of help once the diagnosis is made. The twin concerns of diagnosis and assistance are included in the discussion in order to highlight the probable symmetry between the two factors. In many cases the operating assumption, simply stated, is that the linking agent or outsider is the only possible source of assistance (and/or through him or her other outsiders). Conversely, there are other perspectives which would demand that the client function as the source of help for the problem once a clear diagnosis has been made. In a collaborative or joint situation, the discussion as to the source of help would likely be an open question framed by the parameters of the problem situation. The simple distinctions, then, are between the client, joint, and linking agent.

3. WHAT IS BEING ADVOCATED? Another dimension which distinguishes the roles is the nature of the advocacy. Historically, many of the roles have been viewed as essentially non-advocate positions; however, a recent insight is that each of the roles does have a posture of advocacy, but that what is being advocated distinguishes one from another. The main distinctions are among advocacy of the client's inherent potential or capacity; advocacy of a particular process, e.g., the use of a rational problem-solving process; advocacy of the use of information as an aid to decision-making; or advocacy of a particular product or solution as an answer to a problem situation.

4. WHAT IS THE FOCUS OF THE CHANGE EFFORT? Next, it is important to recognize that the primary focus is different for each of the roles. These range across a focus on the curriculum or program content (typically including instructional methodology), on the decision-making process and its relative rationality, and on organizational processes, especially relationships between working units and the congruence between individual and organizational needs.

5. WHAT IS THE TARGET OF THE CHANGE EFFORT? Similarly, there is a range related to the level at which the intervention is targeted. For present purposes, these range from the individual, through the group, to the organization.

6. WHAT IS THE DEGREE OF MUTUAL GOAL-SETTING? Related to the target of the intervention is the degree to which linking agents derive the direction for their efforts from the perceptions, needs, requirements, et cetera, of the client versus direction from their own needs or preferred solutions. While some might wonder how professionals could not be responsive to the client's needs and situation, a realistic assessment suggests that the extent of mutual goal-setting is a distinction worth noting explicitly. The range is from low to medium to high.

7. WHAT IS THE EXTENT OF EMPHASIS ON LONG-TERM PROBLEM-SOLVING CAPABILITY? The majority of linking agent roles focus on solving short-term, here-and-now problems. The press of day-to-day business and the number and diversity of real problems justifies and explains the attention given to these problems. However, there is growing acknowledgement that it is not enough for a client to simply "experience" a particular solution. There is no guarantee that the next time around the client will be in any better position to diagnose the situation or explore alternatives independent of the linking agent. Thus, when possible and appropriate, there needs to be explicit attention given to the development of long-term problem-solving capacity in the client system. Different roles place different emphases on the development of this capability. The range is from little to some to much on this dimension.

Front-End Roles. The linking agent roles which focus on the early stages of a program improvement process, which lead up to and include an active decision about a particular problem or program change, will now be addressed. Following the descriptions of the roles, they will be arrayed against the distinguishing features just presented and their relative emphasis on each feature noted. The five front-end roles follow.

1. PRODUCT PEDDLER. The exemplar of this role is the commercial book salesperson. Interaction with potential clients is directed solely toward the closing of the sale in such a way that repeat business will occur. Actual face-to-face contact is relatively infrequent. Principal strategies are the use of aesthetically appealing promotional materials. These are typically one-way, rather elemental presentations of features, bolstered by references to other adopting organizations or individuals which are believed to have credibility with the potential buyer. Often the salesperson is able to offer quantity or prepublication discounts and bonus materials with certain combination purchases. In many cases his/her contact with the individual client ceases as soon as the order is taken. In others, (s)he may follow through to be sure that materials have arrived in good order and that the instructions for their use are clear.

2. INFORMATION LINKER. These individuals are typified by the information specialists housed in various ERIC Clearinghouses and Information Centers around the country. The typical interaction with clients is by phone and generally at the client's initiative. They seek to clarify the information needs of the client or the question the client is attempting to answer so that a strategy for searching a variety of data bases, either by hand or by computer, can be developed. In many cases the work of the Information Linker is facilitated by an arrangement between the Information Center and the school district which eliminates most discussion about cost and related items, depending on the nature of the request. The product is delivered to the client in an information packet which may contain abstracts derived from a computer search, bibliographies compiled by the Information Linker, copies of journal articles retrieved, or sample microfiche of highly relevant documents. Though in most transactions the Information Linker engages in a dialogue with the client by phone, frequently the only communication is through a written request form. Where dialogue does occur, its purpose is focusing and defining the question in such a way that it is manageable for the Information Linker as well as on-target with respect to the interests of the client.

   The questioning by the Information Linker is designed to elicit enough information to enable an efficient and focused search to be conducted. Under optimal conditions, there is a mid-point check with the client to refocus or refine the inquiry. This practice adds substantially to the cost and is

probably not employed on a regular basis by most Information Centers. Given a reservoir of experience and/or some organizational history, the Information Linker typically builds up a file of searches, bibliographies, and relevant materials which can be quickly and easily assembled to meet many information requests, therefore precluding the need for an individualized solution to every inquiry. This improves the turnaround time and offers the possibility of focusing the client's request by putting stimulus materials in their hands early in their decision cyle. The goal of most Information Linkers is to improve the quality of decision-making in schools by stimulating the use of relevant research and other information. Their efforts are grounded in the belief that individuals can become increasingly rational in their work and should draw upon the experience of others, as captured in information documents, in solving their day-to-day problems.

3. PROGRAM FACILITATOR. A relatively new arrival on the scene is the Program Facilitator, exemplified by the State Facilitators of the USOE-sponsored National Diffusion Network (NDN). These individuals offer schools a wide range of tested programs which have undergone the scrutiny of a Federal and/or State Review Panel. Unlike the Product Peddler, the Program Facilitator presents the client with a broad variety of different curricular and instructional approaches, often grounded in different philosophical assumptions about learning and tested under differing conditions. The vast majority of the offerings call for some kind of in-service training in order to implement them effectively, in contrast to a simple product choice and use.

   The typical operating strategy of a Program Facilitator is to alert a wide variety of schools in a given area to the availability of a range of programs, arrange for them to attend awareness conferences where a number of programs are introduced, provide opportunities for them to inspect further either the materials or the programs themselves in operation, and then arrange for initial training while being available to make phone calls, collect additional information, and so on, as requested.

   By and large, Program Facilitators are not explicitly concerned with the quality of the decision or the manner in which it is made; rather, they assume that these are the province of the individual school district. Their stance is generally neutral with respect to particular programs; instead they promote the notion of choice from among many alternatives. Some may delimit their offering based on state or regional priorities. On the one hand, their pool is broad and covers a range of subject matter at many grade levels, but on the other hand, it is not all inclusive. Occasionally, these Program Facilitators are housed in agencies which also function as Information Centers, thus

offering an enriched situation for the client system's decision-making and choice of programs. This situation is not, however, widespread at the present time.

4. PROCESS ENABLER. This role in its broadest form is content-free and concentrates on communication, decision-making, leadership, and organizational structure problems which inevitably arise in attempts to upgrade the efficiency and/or effectiveness of schools. Generally, the Process Enabler begins "where the client is" and attempts, through several iterations, to assist the client in a clear definition of the problem and development of appropriate action plans for solving it. In most cases, the relationship with the client is one that extends over time and includes a range of diagnostic conversations and/or group meetings, sometimes complemented by formal data collection. For the purposes of this discussion, their emphasis is still on the front-end. A common function of such a person is to conduct or to critique faculty meetings or curriculum committee deliberations. Teacher evaluation or program review issues also may become the focus of the Process Enabler. Typically the initiator of the relationship is a decision-maker in the system, and relationship issues between faculty and administration almost inevitably constitute a component of the intervention. Their concern is on helping the system do its currently defined job better or more efficiently depending on the decision-makers. However, they typically have a value orientation which favors widespread participation by those potentially affected by any decision. This concentration usually results in greater involvement of teaching personnel in assessing the current situation and delineating action alternatives.

   The OD consultant, communications specialist, process consultant, and group facilitator are typical examples of this role in action. Their general goal is to work themselves out of a job and to leave the client with some increased comfort and -- perhaps -- skill in solving the kind of problem which precipitated the initial request for help. These individuals are not necessarily well-received by school faculties whose primary concerns, at least on the surface, are less related to organizational process than to the teaching of kids. This means that a "pure" process approach employed by individuals unfamiliar or inexperienced with the content of schooling will face certain difficulties from the outset.

5. PROVOCATEUR/DOER. All of the foregoing rules generally proceed from an acceptance of the status quo of the client system, engaging in various degrees of adjustment to improve its functioning without modifying its general structure and direction. There is a role, though only dimly conceived at this time, for individuals who have a vision of alternative futures in which they have confidence and who have enough

concern for the state of human systems that they attempt to initiate a more fundamental inspection on the part of school people of what is possible. They may scare or confuse most school people, but their position in the constellation should not be ignored. The critics of today's schools such as Holt, Kozol, Illich, and Hentoff probably come to mind most readily. It seems clear, however, that as interesting and provocative as these individuals' ideas are, these individuals have not functioned as leaders implementing major changes except in a very few locations.

This has occurred, in large part, because of their inability to provide concrete and workable alternatives which can be seen as practicable by a large enough number of school people. They have been unsuccessful in "helping the organization to make sense of its experiences so that it has a confident basis for future action," (Pondy, 1976b). They have not created the hope that leads to action guided and energized by its initial but changing vision. We could identify "Provocateurs" who are somewhat less shrill than the critics noted above and who have the linguist's skill in creating and using metaphors and myths to sustain individuals in ambiguous settings. Some of the more effective exemplars who talk about new ways of educating and act on their beliefs include Dwight Allen, who was able to produce a major transformation of a large component of a state university within a very short period of time; Warren Bennis who, with the assistance of Hendrick Gideonse, has made major strides at the University of Cincinnati; and Per Dalin, whose International Management Training for Educational Change efforts in promoting functional temporary structures bridging entire continents should be better known and emulated by the American school people. That few if any "Provocateur/Doers" come to mind when thinking about elementary and secondary schooling is a sad commentary about the present state of affairs.

How these five roles relate to the distinguishing features noted earlier is delineated in Figure 6.

Back-end Roles. Similarly, there are five roles which are evident in the later phases of a program improvement effort.

1. RESOURCE ARRANGER. The first role which comes into play when a planned program improvement effort or change gets underway is that of Resource Arranger. In its simplest form, this individual simply assures that the box of books or materials actually arrives, is the proper quantity, and so forth. In more elaborate situations logistical arrangements for introductory training or construction or modification of facilities may be called for. In some cases, the Resource Arranger may bring in additional people as consultants. Although any of the roles described in the preceding section

FIGURE 6
RELATIONSHIP OF DISTINGUISHING FEATURES TO FRONT-END ROLES OF LINKING AGENTS

LINKING AGENT ROLES	Diagnosis	Source of Help	Advocacy	Change Effort Focus	Change Effort Target	Mutual Goal-Setting	Long Term Problem-Solving Capability
Product Peddler	Linking Agent	Linking Agent	Solution	Curriculum	Individual	Low	Little
Information Linker	Linking Agent	Linking Agent	Information	Decision-Making	Individual	Medium	Little
Program Facilitator	Client	Linking Agent	Solution/ Process	Curriculum	Individual/ Group	Medium	Little
Process Enabler	Joint	Joint	Process	Organizational Processes	Group/ Organization	High	Some
Provocateur-Doer	Joint	Joint	Client's Potential	All	Organization	High	Much

might find themselves functioning as a Resource Arranger, it has been placed on the back-end side of the line to insure symmetry.

2. INFORMATION LINKER. This role mirrors the role of the Information Linker in the early phase, as there is likely to be continued need for information following the decision to adopt a particular program or course of action. Thus, the nature of the relationship with the client remains the same, and the transactions would look virtually identical. However, the substance or nature of the questions will differ. Typical questions might include, "How do I maintain records for this individualized program which I have adopted?" "How do I keep the community informed of my progress?" "How can I best evaluate this program and present findings to the school board?" "My teachers seem to need additional training in order to use this curriculum; where can I get consultants?" Again, many of the questions will elicit a response drawn from research or other printed material. Oftentimes the Information Linker will go to a human resource file or other roster of person resources.

   The nature of the questions which will emerge during the later phases calls for linking agents to extend themselves a bit more, to inject their own knowledge and experience into transactions, and to be slightly more aggressive in order to achieve maximum effect. For example, knowing the context of the program effort, the information linker can anticipate problems and provide information in advance of a formal request. The linkers are likely to be caught up more in

solving problems flowing from implementation activities than in generating alternatives for action as they did in the earlier phase of their relationship. Of course, they may be just entering the process at this point and not have firsthand knowledge of what has come before.

3. TECHNICAL ASSISTER. The role of technical assister is one that is increasingly seen as vital to the successful implementation of a program. The type of technical assistance offered can be of two types: first, there is that which is concerned with getting the kinks out of the particular program and which requires a certain amount of content knowledge, either of the program itself or of the subject matter, e.g., reading, math, science. Equally important is general problem-solving assistance. This type is employed as the school personnel begin the process of trying to change their prior modus operandi to meet the requirements of the new program. In this type of technical assistance, technical assisters convene faculty groups to look at the difficulties they're having in their individual classrooms, to share successes and failure and alternative strategies for coping, and the like. They also may marshall other adopters of similar programs for exchange sessions and provide the psychological support necessary to get adopters over the bumps of any substantial change effort.

4. ACTION RESEARCHER/DATA FEEDBACKER. Going one step beyond technical assisters who are primarily concerned with the success of the individual programs they are facilitating, the action researcher is concerned with learning and with helping the school learn the ways in which the current experience can help solve future problems. The focus is on studying what is going on, while assisting its implementation, in order to generalize from it to similar situations which may emerge later. Typical techniques include feedback sessions based on observation, survey feedback procedures incorporating information drawn from formal instruments completed by respondents in the school, and combinations of the foregoing. Typically, there is some attempt to learn more about the current situation. Such inquiries often provide the fodder for spinoff efforts directed at the generic processes of the school or system, e.g., curriculum development procedures, staff development, community relations, and decision-making, among others.

5. EDUCATEUR/CAPACITY BUILDER. To accommodate the long-term potential of schools as organizations capable of growth themselves and capable of promoting growth for their members one must envision an expanding linking agent role. In Western Europe, there are individuals called "Educateurs" who are essentially roving systems improvement specialists (Barnes, 1975). They are legitimized as generalists in the instructional process who engage with a particular school for a period of time and assist it in making a substantial leap

forward from its current plateau. In the contemporary American scene, the parallel notion at the system level is that of "building capacity." This generally entails pushing beyond routine responses to specific here-and-now problems and establishing a capacity or reserve to cope with anticipated and unanticipated problems in the future.

The number of organizations which are prepared in this kind of process and which are located in environments which will support capacity building efforts is rather small. It is clear that the short-term requirements for linking agents are likely to be in areas other than this one. That we should strive to establish the capacity for capacity building in our linking agents seems a worthy goal, however. These individuals need to bring together the vision and perspectives of the futurist, the comprehensive knowledge of available human and information resources, a wide repertoire of interpersonal and technical skills, and diversified experience in a number of organizational settings such that a range of alternatives can be presented to any given client for consideration and modification. The operational parameters of capacity building are unknown at this time even if the terminology is widely used.

How these five roles relate to the other distinguishing features is delineated in Figure 7.

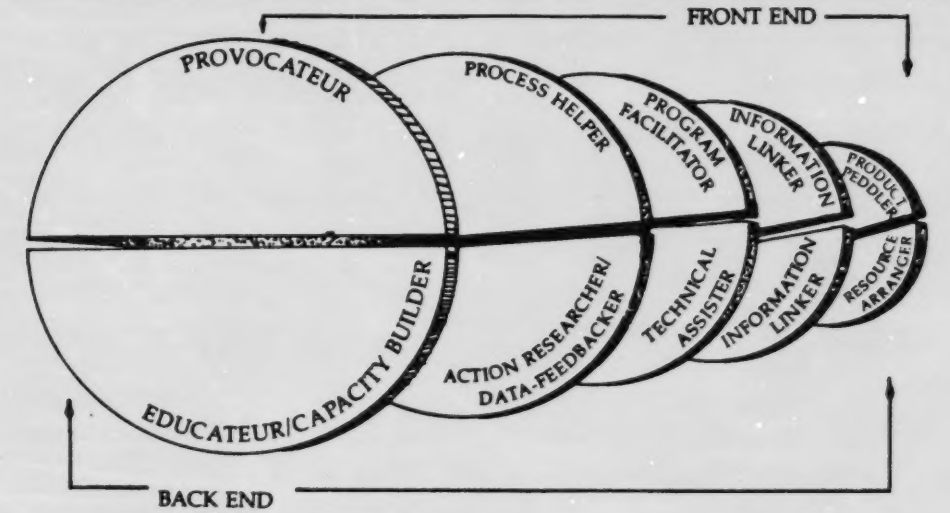
FIGURE 7
RELATIONSHIP OF DISTINGUISHING FEATURES TO BACK-END ROLES OF LINKING AGENTS

LINKING AGENT ROLES	Diagnosis	Source of Help	Advocacy	Change Effort Focus	Change Effort Target	Mutual Goal-Setting	Long Term Problem-Solving Capability
Resource Arranger	NA	Linking Agent	Solution	NA	NA	Low	NA
Information Linker	Linking Agent	Linking Agent+	Information	Decision-Making	Individual	Medium	Little
Technical Assister	Joint	Linking Agent/ Joint	Solution/ Process	Curriculum	Individual/ Group	High	Some
Action Researcher/ Data Feedbacker	Joint	Joint	Process	Process/ Organization	Group/ Organization	Medium/ High	Some
Educateur/Capacity Builder	Joint	Joint	Client's Potential	All	Organization	High	Much

Linking Agent Types. The ten roles presented in the foregoing pages constitute two functional subsets which can be observed in the field. Each successive role in each subset could overlap its predecessor, and in that sense they represent a possible continuum increasing in "fullness" and complexity. From my observations and a belief that most external agents would agree

to the importance of continuity with respect to the client relationship, the ten roles lend themselves to combination of symmetrical "types." That is, each of the roles arrayed on the front-end continuum is mirrored by a role on the back-end continuum. If a linking agent functions primarily as an information linker in early transactions with the client, (s)he is more likely to play a similar role in later phases of the relationship. A graphic view of these idealized symmetrical types is illustrated in Figure 8. Naturally, reality is probably not as tidy as that. However, it does show us some logical directions in which to proceed when training linking agents whose current role could be complemented by expansion.

FIGURE 8
COMPLEMENTARY AND SYMMETRICAL LINKING AGENT ROLES



PREREQUISITE ATTRIBUTES OF EFFECTIVE LINKING AGENTS (Adapted from Crandall and Eiseman, 1971; Eiseman, 1974; and Crandall et al, 1974.)

Each of the roles described in the preceding subsections requires a mix of skills, many of which will not be possessed by potential linking agents and therefore will become the foci of training programs for them. Additionally, it is worth stressing that the roles are not for everyone. Matching the potential linker to the requirements of the job is every bit as crucial as the need to match the proposed program to the client's needs and requirements. Selecting linking agents is not simple, whether an agency is choosing from among already existing staff or whether it is hiring new staff from the outside. Half of the battle is won or lost at the point of initial selection.

It is also worth distinguishing between education and training. Stated most simply, the distinction is that training is job-specific while education is person-specific. In this context, the preceding sections have addressed components of the universe within which the linking agent will work and suggested a need for extensive and ongoing understanding of these classes of entities and their dynamic interrelationships. Much of this knowledge should be the subject of an ongoing educational effort initiated for or by linking agents. But many of these topics are ones in which any highly competent educational professional desires a thorough grounding. As such, they are the proper focus of education for the individual and are not exclusively related to the requirements of a particular linking agent job or role.

With respect to job-specific training, it is necessary first to determine the particular roles one desires to take or recruit for, to assess existing skill levels, and then to design and implement a training program to fill in whatever gaps exist in an individual's repertoire of skills. Training, then, is concerned primarily with skill development, though most training designs will also incorporate segments which are of a general educational nature.

At The NETWORK, we have found that many of the attributes necessary for success are not amenable to the type of training efforts that can be mounted feasibly. A rather careful and systematic assessment of the potential linking agent's existing capabilities has proven essential.

We have devised and refined a rather complicated, multi-stepped selection process based on the work of the Office of Strategic Services and detailed in Assessment of Men: Selection of Personnel for the Office of Strategic Services (1969). It includes the design and structuring of simulated experiences in which the candidate is called upon to exhibit certain behaviors reflecting his/her current level of skill or understanding in specified areas. We have employed the procedure a number of times over the last several years, and it has been used in at least two other settings, one of which was an agency hiring a team to work in the NIE-sponsored State Capacity Building Program.

Our experience has resulted in our being much more pessimistic about the possibility of training in the non-technical areas and verified the importance of selecting (versus training) for certain personal and interpersonal attributes. I believe that the successful linking agent, operating in an environment as complex as that suggested in this document, is a very special person indeed. In particular it calls for an individual who, Lippitt has suggested, needs to possess an "increased awareness of self, others, and the larger environment," allowing "for a more conscious use of self...as a professional tool rather than relying on actions stemming from an unexamined, intuitive base." (Lippitt, 1975a, p. 217.)

In this subsection those prerequisite attributes which we have considered in selecting linking agents will be sketched and followed by descriptions of basic skill clusters amenable to training.

Cognitive Habits and Abilities. The requirements listed below are those we have found to bear on an individual's ability to operate in a complex environment. They should be understood to be measurable only indirectly by means that are yet incomplete, imperfect, and generally subjective. A good linking agent:

1. abstracts and conceptualizes the basic elements of a problem.

2. responds constructively to new information.

3. provides original ideas and fresh perspectives.

4. brings theory to bear on problems occurring in action settings.

5. resists premature closure but proceeds toward closure when appropriate.

These items should be taken as suggestive; they reflect the writer's bias toward a problem-solving orientation for linking agents.

INTRAPERSONAL COMPETENCIES. These are general "life" competencies which undergird one's actions and reactions. They are reflected, if not necessarily demonstrated, in interpersonal transactions.

1. PROACTIVITY. This is related to how one perceives decisions, consequences, relationships, problems, and options. The distinction is between sitting back (mentally) at any stage in an intellectual situation versus taking the initiative to structure the circumstances or create a situation that will provoke some outcome in a particular direction. It is the difference between either accepting the status quo or waiting for new events to impinge upon one and, on the other hand, creating one's own reality.

Other manifestations of proactivity are the extent to which one actively seeks problems versus waiting for them to arise. The point here is that many problems will announce themselves to the linking agent, but in any given setting there will be those relevant and worthy problems which, if actively sought out, may hold more promise than those that announce themselves. The proactive person is in greater control of the overall setting than the reactive person who simply passively responds to the environment.

Related to the problem-seeking notion is the practice of

expanding boundaries. This requires challenging assumptions and testing whether or not apparent givens are actually givens in a situation. One does this by making observations, asking questions, performing experiments or exerting influence to alter those things initially intended as givens.

We increasingly find ourselves encouraged by our culture to accept certain things as givens without testing them explicitly. Perhaps the simplest illustration of this phenomenon at work is the following simple puzzle:

a. Given the nine dots below:

b. Take a pencil and draw four straight connected lines which pass through all nine dots without lifting your pencil from the paper or retracting any lines. Try to solve this puzzle before looking at the answer on page 47 .

George Peabody, who has developed an exceptionally useful simulation called Powerplay (1973), uses the puzzle above to illustrate the shortcomings inherent in the typical tactics employed by individuals in situations where they are called upon to grapple with power issues.

He says:

> Most people are unable to solve this problem. The probable reason for this is an assumption that one must conform to implied boundaries (or rules) which in fact do not exist. By playing within these imagined boundaries, a person is powerless to solve this puzzle or the more important puzzles of how to get what you want or to get done what you want to get done in life. (Emphasis added)

It is self destructive to accept as the limits of your behavior the real or implied rules, the real or implied expectations that others have of you, or other such boundaries. Imagined boundaries can unnecessarily limit your freedom and power if you let them. If, for instance, you accept the fact that the world is flat, you won't get around very much.

Real boundaries, however, necessarily limit your freedom because they are maintained by real rewards and punishments. There is a price to pay for crossing them.

Thus the primary questions are:

a. Are the boundaries real or just in my imagination? What are the realities?

b. How might I test them?

c. Do they restrict or sustain my freedom and power?

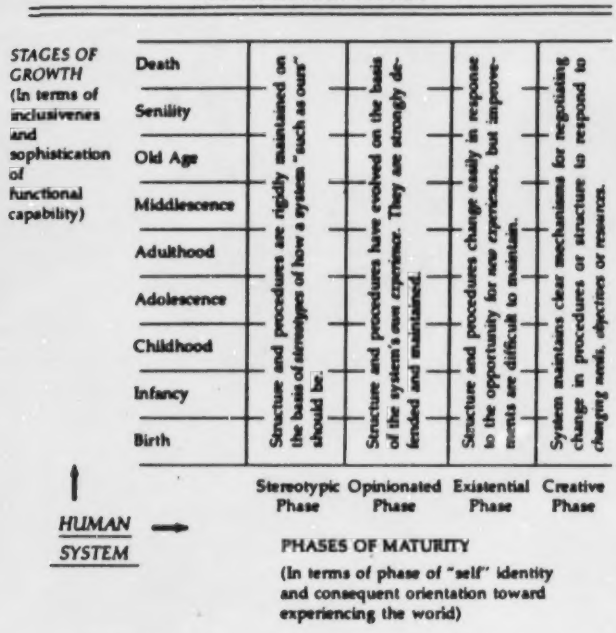
d. What are the costs and payoffs to me if I:

1. play the game, conform to expectations?
2. go outside the boundaries?
3. change them?

As soon as you start asking these questions, you have the freedom to select from a greater number of tactical options. You can cross boundaries or stay within them as you choose. (Peabody and Dietterich, 1973, pp. 11-12)

2. MATURITY. Given the context within which they are working, linking agents must make decisions and solve problems that result in actions consistent with mature attitudes and values.

FIGURE 9
GROWTH AND MATURITY POSSIBILITIES
FOR A HUMAN SYSTEM


STAGES OF GROWTH (In terms of inclusiveness and sophistication of functional capability)
Death
Senility
Old Age
Middlescence
Adulthood
Adolescence
Childhood
Infancy
Birth
Structure and procedures are rigidly maintained on the basis of stereotypes of how a system "such as ours" should be.
Structure and procedures have evolved on the basis of the system's own experience. They are strongly defended and maintained.
Structure and procedures change easily in response to the opportunity for new experiences, but improvements are difficult to maintain.
System maintains clear mechanisms for negotiating change in procedures or structure to respond to changing needs, objectives or resources.
Stereotypic Phase
Opinionated Phase
Existential Phase
Creative Phase
HUMAN SYSTEM
PHASES OF MATURITY
(In terms of phase of "self" identity and consequent orientation toward experiencing the world)

(from *Preparing Educational Training Consultants*, Northwest Lab)

Jung, in developing a schema for the Preparing Educational Training Consultants (PETC) program at the Northwest Lab, has given considerable thought to the concept of maturity for individuals and organizations. Figure 9, excerpted from those materials, illustrates his view of the phases of maturity.

While at first glance it might seem that the desirable definition of maturity would be that associated with either the existential or the creative phase as labeled by Jung, it is probably more useful to work toward helping individuals be demonstrably conscious of where they are on the continuum in each particular situation, since the boundaries (between phases and stages) are relatively permeable and may well be situation-specific. There is no "best" position, only an "informed" one. The notion of dynamic movement presented by Jung is consistent with the familiar Maslovian hierarchy of needs in that it describes a constantly expanding set of goals toward which one is striving.

3. SYSTEMATIC REFLECTIVITY. This competency refers to the way an individual regularly uses past experience to influence and inform the nature of the subsequent experience. It is the notion of living life as a set of working hypotheses which, as an action researcher, one tests on an ongoing basis, using each set of results to formulate additional working hypotheses to be tested. Viewing problem situations from a long-term perspective is also central. This long-term perspective entails moving periodically from a relatively low level of analysis to a higher level of analysis, stepping back from the trees in order to see the forest, periodically reminding oneself of the ultimate objectives and viewing the gains or losses that might accrue in the short run from taking certain action within the larger context.

The reflective person challenges the common practice of organizing the world into logic-tight compartments where we often don't know what we know. A Persian proverb expresses the point beautifully:

> There are four kinds of men:
> He who knows not and knows not he knows not; he is a fool, shun him.
> He who knows not and knows he knows not; he is simple, teach him.
> He who knows and knows not he knows; he is asleep, wake him.
> He who knows and knows he knows; he is wise, follow him.

These broad categories of intrapersonal competence -- proactivity, maturity and systematic reflectivity -- are among those on which we can assess potential candidates and about which they can be educated and supported in refining.

Work-Related Characteristics. While the following items many might consider to be self-evident, they are included because it is essential that we be explicit about our expectations of people. Those hiring, training, and supporting linking agents should test their assumptions about the characteristics they believe are important. Some suggested characteristics which are work-related then, are that the linking agent --

1. takes initiative.
2. can be depended upon to follow through.
3. is productive, can be described as having high output.
4. exibits competence, accomplishes tasks effectively.
5. displays loyalty to the groups with which (s)he is associated and the organization for which (s)he works.

Evidence regarding these attributes is usually available from one's own experience or from previous employers.

Personal Qualities. There might be some argument as to the legitimacy of including personal qualities in any consideration of competencies or skills. They are important in the way in which professional staff are assessed by their superiors and colleagues, as well as the way in which they are perceived and received by clients. It appears to be helpful to be explicit about some of these qualities, and sharing them with potential staff gives them a clearer picture of our values and expectations for them in their interactions with us and our clients. They are included as suggestive of they type of things to be considered. A good linking agent --

1. expresses him/herself in an open, straight-forward, and candid manner.
2. appears self-directed, autonomous.
3. conveys that his/her prior experience has been varied, meaningful, and useful and that from it (s)he has developed a sense of perspective.
4. displays a sense of and concern for justice.
5. exhibits integrity.
6. demonstrates a concern for his/her own growth.
7. triggers enthusiasm in and energizes others.
8. exhibits a sense of humor.

9. displays social behavior appropriate to the client system.

Sieber, based on his extensive study of the Pilot State extension agents, suggests adding:

10. has low ego needs.
11. possesses high tolerance for frustration.
12. exhibits orderliness.
13. has the ability to enjoy new experience.
14. can exploit multiple role relationships for achievement of tasks.
15. maintains professional aloofness from internal politics.
16. has the ability to assess and exploit situations for achievement of tasks.

In the preceding paragraphs, four classes of competencies or characteristics seen as prerequisites to any technical training for linking agents have been outlined. When selection decisions are being made, such attributes and appropriate others should be consciously explicated, considered, modified, and ranked to conform to the requirements in an individual situation. These attributes are not the sort of thing easily modified by training interventions. Of course, it is possible and desirable to provide an environment the norms of which reinforce and support these attributes in linking agents. If one can secure a group of linking agents who possess these attributes in appropriate measure, then the chances for successful training in the technical skills required, the focus of the next subsection, will be greatly enhanced. Figure 10 arrays these distinguishing features in relationship to the ten linking agent roles described and denotes the author's estimate of the relative importance of each cluster of prerequisite attributes to each role.

TECHNICAL SKILL CLUSTERS FOR LINKING AGENTS

We are all familiar with the phenomena embodied in the statement of "The best laid plans of mice and men...," and "The road to hell is paved with good intentions." Once we have a bead on the particular job of a given linking agent, we can then be more precise in delineating the skills needed to execute the job and in assessing the extent to which they are present or need to be

FIGURE 10
RELATIVE IMPORTANCE OF PREREQUISITE ATTRIBUTES
FOR VARIOUS LINKING AGENT ROLES

LINKING AGENT ROLES	PREREQUISITE ATTRIBUTES			
	Cognitive Skills and Abilities	Intra-Personal Competencies	Work-Related Characteristics	Personal Qualities
Product Peddler			++	
Information Linker	++	+	++	
Program Facilitator	++		++	+
Process Enabler	+++	+++	+++	+++
Provocatuer	+++	+++	++	+++
Educateur/Capacity Builder	+++	+++	++	+++
Action Researcher/ Data Feedbacker	+++	++	+++	+++
Technical Assister	++	++	++	++
Information Linker	++	+	++	
Resource Arranger			++	

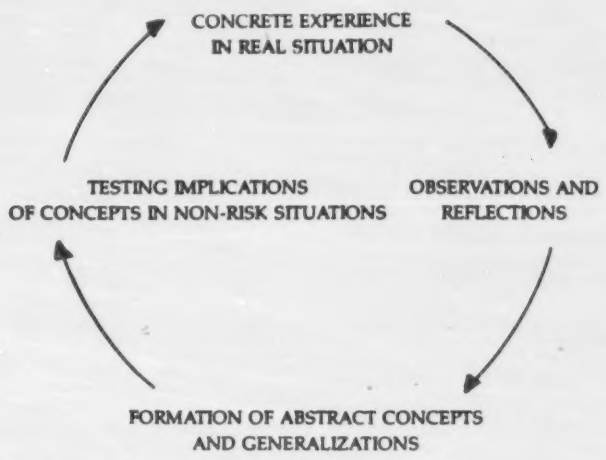
KEY: (blank) unimportant
+ minor importance
++ moderate importance
+++ critical importance

developed. Skills can be defined as "effective behavioral implementation of goals, intentions and plans, and affectively appropriate expression of feelings, values, ideas, opinions, and sensitivities." (Schindler-Rainman and Lippitt, 1975, p. 226.) Those who bemoan the lack of a curriculum focusing on behavioral skill development in social relations and social problem-solving, especially in school settings, have a good point. That a broad repertoire of behavioral skills or implementation competencies is required of linking agents is not likely to receive argument from the readers of this paper. What is needed is a series of training episodes combined with multiple support systems where linking agents can discover and be confronted by the incongruities between their action-intentions and their action-effects. (Readers interested in an indepth treatment of the difficulties involved in helping professionals perceive the gap between their espoused

theory-of-action and their actual theory-in-use so as to enhance their professional effectiveness should read Argyris 1964, 1976a; Argyris and Schon, 1974.)

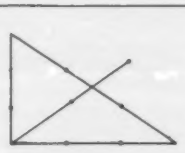
The laboratory approach has been an exceptionally useful vehicle for such skill development. It provides the kind of feedback and motivation to re-practice and to try, try again in order to develop greater clarity and behavioral competence. The laboratory method of experiential learning, in a simplified form, can be portrayed as follows:

FIGURE 11
ELEMENTARY CONSTRUCTS OF EXPERIENTIAL LEARNING



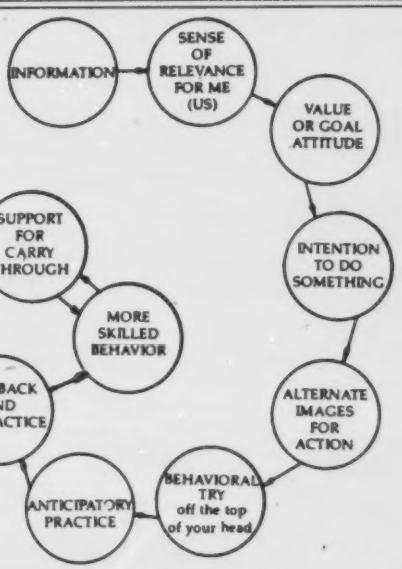
This approach is put forward here as one recommended mode for training, where appropriate. It has the advantage of offering participants a chance to try things out in settings where they are not "playing for keeps," to receive helpful feedback and critique about their performance, to practice a new iteration of the skill, and to develop increasing confidence before going out to the real world. If the linking agent's support system is designed appropriately, the concept of laboratory education can be applied at the level of the actual job itself, with each transaction or episode with a client being viewed as a trial situation to be learned from.

Answer to problem posed on page 41.



Naturally, the learning process is somewhat more complicated than the elementary diagram above might suggest. See Lippitt's formulation of the elements below in Figure 12 for added detail. It is useful in designing training events and in focusing the specification of requisite skill clusters.

FIGURE 12
PARTS OF LEARNING PROCESS INSIDE THE LEARNER OR LEARNING SYSTEM



Commentary on Diagram

One of the ingredients inside of us that has to get linked somehow to behavior is some kind of cognitive content; *information* or *knowledge* it is often called. A second ingredient is a belief that the bit of information has *relevance* for the self. The sense of relevance may be connected to or help generate a *goal* or a *value* or *belief*. And often, a *goal* or *value* helps generate an *intention* and *commitment to act* -- at this point the internal processes of the self are sneaking up on action, but we still have no guarantee that ideas will be converted into overt action.

Reprinted by permission of the publisher from R. Lippitt, Linkage Problems and Process in Laboratory Education. In K. Benne, L. Bradford, J. Gibb, and R. Lippitt (Eds.), The Laboratory Method of Changing and Learning: Theory and Application. Palo Alto, California: Science and Behavior, 1975, p. 181. © 1975 by Science and Behavior.

In addition to the prerequisite competencies and attributes already noted, and against the backdrop of a preferred method of providing training and education for linking agents, nine skill clusters will be described briefly, clusters which need operationalization and incorporation in a training program, depending upon the specific job of a given linking agent.

The nine are:

- Problem-Solving Skills
- Communication Skills
- Resource Utilization Skills
- Planning Skills
- Process Helping Skills
- Implementation Skills
- Content/Subject Matter Knowledge
- Evaluation and Documentation Skills
- Survival Skills

Problem-Solving Skills. There are many generic approaches to problem-solving, and the linking agent has an array of tools which might be of assistance in any given situation (see NTL's Problem-Solving Booklet, Kaufman's Systematic Problem Solving, Northwest Lab's Research Utilization Problem-Solving, Schmuck's Situation-Target-Path (STP) process. The rational problem-solving sequence generally includes:

1. defining the problem (or diagnosing the situation),
2. assessing the conditions surrounding the problem and their relative weight (this is typically done using some form of force field analysis),
3. generating some set of action alternatives,
4. choosing from among them and instituting an action plan,
5. monitoring the implementation of the plan in such a way that a feedback loop exists.

This is a linear problem-solving approach. Within it, or as a substitute for it, there are various non-linear (so-called "creative") strategies which can be incorporated: brainstorming, images of potentiality, Synectics, divergent thinking -- these are labels for some of the main variations.

It is crucial that linking agents get a solid grip on the general problem situation. Only by delimiting their efforts can they hope to succeed. Classifying problem situations in some way so as to reduce the area of inquiry is called for. Recent work at the Northwest Lab has made a rather useful distinction among three types of problems that might call for different sorts of problem-solving techniques. First is the technical problem-solving, wherein both the current state of affairs and the desired end point are known and able to be specified. In this instance a systems analysis or operations research mode is an appropriate problem-solving approach. Second is so-called theoretical problem-solving, where the current state of affairs can be delineated, but the desired end state cannot be specified. This type calls for an action research approach which will develop a series of iterations leading to an agreeable end point (the RUPS process is one operational version of this action research approach). The third type is philosophical problem-solving, where there is clarity as to the current state of affairs as well as to multiple desired end states, but fundamental disagreement as to the desirability of one or more of the possible end states. In this instance, the problem-solving approach of choice is conflict resolution and negotiation procedures.

Eiseman (1974) suggests that virtually any situation in a human system can be viewed and addressed as a potentially solvable problem or set of problems of one of the following types:

1. Distorted or non-existent perceptions of relevant reality
2. Distorted or non-existent communications among subsystems that need to collaborate
3. Feelings of frustration
4. Feelings of impotence
5. Undifferentiated dissatisfaction with the situation as it is
6. Vagueness or confusion regarding direction of major objectives
7. Minimal or non-existent commitment to explicitly stated high priority goals
8. Inadequate ability to formulate plans to achieve explicitly stated high priority goals

9. Inadequate ability to make decisions relating to explicitly stated high priority goals

10. Inadequate ability to implement high priority action plans

11. Inadequate attention devoted to the maintenance of the system

12. Existence of untapped, surplus, valuable resources

Koberg and Bagnall provide several hundred useful tools and techniques in a compendium entitled The Universal Traveler: A Companion for Those on Problem-Solving Journeys.

There is a need for linking agents to develop a repertoire of usable problem-solving approaches, to be able to classify problem situations so that the appropriate technology can be employed, and to know when to call for help in any one of the substages of the problem-solving process.

Communication Skills. This cluster of skills concentrates on generic communication processes. Linking agents need to have well-developed oral, written, and other (mediated) communication skills. In certain situations they will be called upon to make presentations to individuals or groups that will require the use of presentation aids. There will be situations where questioning skills are necessary in order to move productively forward on an agenda. In most situations, active listening skills are imperative for effective communication. There are situations where a one-way mode of communication, though not the preferred mode for many linking agents given their likely value set, will be called for. Various aids are available for developing and refining oral communication skills; there are several excellent resources for developing and refining skills in written communication (see Writing for Results, 1974; Far West Lab's Module on Technical Writing, 1974). The subcomponents of effective interpersonal communication have also been captured in various training programs, including those developed by Northwest Lab and the Center for Educational Policy and Management.

Resource Utilization Skills. At several points in the process of interacting with a client group, linking agents are likely to need to call upon resources other than themselves. Sensitivity in knowing when to "refer" as opposed to offering oneself as the resource is an essential ingredient in successful resource utilization and is likely to be enhanced to the extent that the linking agent is fully conversant with the resources available and the circumstances under which their use would be appropriate.

The backbone of the linking agent's formal information resources remains the ERIC data base and its companions, now accessible by computer in locations in almost every state. The more than

thirty data bases (in addition to ERIC) which can now be accessed via computer add immeasurably to the information that the linking agent can bring to the client. Unfortunately, these sources are not free; cost may become a factor, as may turnaround time. Linking agents need not develop retrieval skills to the point where they would qualify as full-time retrieval specialists, but introductory training in the use of a computer terminal and familiarity with the main indexes used in education, RIE (Resources in Education) and CIJE (Current Index to Journals in Education), as well as some actual experience fingering microfiche and using a microfiche reader and/or reader printer will be invaluable to effective functioning. A recent compendium, A Guide To Sources of Educational Information, by Woodbury (1976), should be on the shelf of every linking agent. It is the best to date, though not absolutely current as of this writing.

In addition to formal information resources, the linking agent should be able to access other programmatic resources, either products or programs themselves or information about projects in which products have been used. Most large scale information centers have developed procedures for cataloguing so-called "fugitive" data of this sort. There are specialized centers which inventory a variety of curricular materials. EPIE (Educational Products Information Exchange, New York, NY) is an exemplary source of "consumer-oriented" information on products of interest to educators. Additionally, the linking agent would do well to either develop or gain access to some bank of human resources. The maintenance of such files is an almost overwhelming task, and initially linking agents will probably rely on their personal contacts. But as one's clientele expands, it becomes necessary to draw upon a larger and larger pool of human talent to supplement one's own resources. Various means have been employed for this purpose. RISE in Pennsylvania has published a directory of human resources for their state. The National Learning Disabilities Assistance/Model Program Support System projects at The NETWORK maintain an active file (on McBee cards) of several hundred consultants in various areas.

Based on our own experience, the difficulties with using human resource files effectively, other than the normal storage, currency, and quality control issues, extend to such difficult matters as: How to provide adequate incentives to the consultants who make up the pool when any one of them may be used very little if at all? How to share in the success of a referral that really succeeds yet disown the failures. Most knotty of all, how to get people (i.e., linking agents) who are rather good consultants in their own right to avoid feeling less than successful if they have to refer to an outsider, especially one who couldn't possibly be as good as they would be -- if they only had time.

To date, the most complete training program directly related to resource utilization in education remains the Educational

Information Consultant (EIC) developed by Far West Lab.

Planning Skills. The cluster of skills associated with planning focuses on the "getting ready" work necessary to assure success during implementation of an improvement effort. It calls for a systematic and cautious look at the job ahead and a delineation of the action steps to be taken, the resources required at each point, the anticipation of probable pitfalls and "crunch" points, determination of budget and other resource allocation requirements, the ability to move from global statements of intent to operational statements that are actionable. It is helpful for linking agents to have at least a rudimentary knowledge of various systematic charting procedures, including flow charting, PERT charting, fault-tree analysis, and the like, in order to array a picture of the impending effort for their own use and/or the clients. Abilities in "organizing for work" those who will be implementing a program are also desirable. Examples might include engaging in review and reflection sessions concerning the plan or engaging in role plays related to anticipated dilemmas (in order to practice the behaviors that may be needed in the real situation in a simulation where failure will not jeopardize the actual effort). The preceding three skill clusters obviously are integral parts of this cluster.

Linking agents able to employ systematic planning will also benefit by using various means of diagnosing relevant organizational components so as to locate the optimal entry points and discern the best path for the ultimate change effort. Though there are a number of tools available to the linking agent, all require some understanding of their underlying principles and practice in their use in order to be used effectively.[2]

There are other sources of particular instruments with varying degrees of focus, including the principal instruments developed by the I/D/E/A-sponsored League of Cooperating Schools in Southern California headed by Goodlad, and the Organizational Needs Inventory (ONI) developed by The NETWORK and based on Havelock's early work. Some of these can be easily used and hand-scored, while others, depending on the number of respondents and the perseverance of the linking agents, require access to computer facilities.

For those with access to a computer, there are at least two computerized programs which profess to measure organizational characteristics in a comprehensive way: the CHAMPUS Program under development by Bowers and his colleagues at Michigan and the PROFILE Procedure developed by Bass. Both utilize a questionnaire as input to a program and both are based on factor analytically developed models of organizational variables which must be taken into account in a major change effort.

Process Helping Skills. At virtually every point of contact

with a client group, use of certain process skills holds the promise of vastly improving the effectiveness and degree of satisfaction of the overall effort. The linking agent should strive to develop a complex of skills including: communicating feelings appropriately; active listening and feeding back of implicit and explicit cues regarding understanding and satisfaction; providing affective support and legitimizing openness when appropriate; confronting when necessary to resolve problems or surface underlying issues; and role-taking, in the sense of developing empathy, coupled with the ability to portray the position of others in a way that does not make them feel as if they are being psychoanalyzed.

More specifically, it's very desirable that the linking agent develop the ability to make a "process intervention" directed at increasing the clients' awareness of what they are doing and enhancing their sense of control over their actions. This calls for observational sensitivity and the ability to induce reflectivity in others so that they can examine their actions in a way that is not threatening. Question-asking directed at checking progress and focus are ingredients in process interventions. Recent work in education has highlighted the importance of values and their centrality to individuals' attitudes and actions. Thus, it would be useful for linking agents to develop a familiarity with values clarification techniques and exercises. A wide range of useful tools for process helping is available, including many from the Pfeiffer and Jones series and the CEPM "Strategies of Organizational Change" program reports.

Sometimes, process problems arise which require far more than well-timed interpretations of ongoing behavior or data collection and feedback cycles. For example, the teachers and principal may find themselves repeatedly engaging in patterns of interaction which everyone agrees are debilitating. Eiseman (1977) has developed procedures which take linking agents step-by-step through the process of designing a full-fledged intervention plan to cope with such counter-productive interaction patterns. Because of their usefulness in resolving the kinds of conflict which school people continually encounter, his 'transition' procedures are especially relevant to linking agents.

Implementation Skills. As has been noted by observers of the scene (e.g., Fullan, 1975), the bulk of attention in both research and practice has been related to the steps leading up to and including the decision to adopt a program. Some preplanning may occur and be more or less systematic, but it is increasingly obvious (Berman and McLaughlin, 1974) that the implementation phase is critical to the success of a program improvement effort. Runkel (personal communication) called attention to the striking convergence of these findings with some in other fields as reported by Coleman (1971), Fairweather (1972), Glaser and Taylor (1973), and the National Institute of Mental Health (1971).

The linking agent, in order to be of assistance at this stage of the process, needs to be able to employ the skills listed above in situations that will, in all likelihood, be more hectic than those that preceded the actual implementation. During implementation, questions of logistics and resource allocation, often shrouding emerging value issues, etc., come to the fore in a way often difficult to deal with. Hall and his colleagues have empirically derived a hierarchy of concerns which need to be taken into account during implementation (Hall et al, 1976). It is most probable that power and status issues (Giacquinta, 1973) will also come to the fore during implementation and require prompt attention by the linking agent.

A compelling case can be made for including the collection of data through relatively formal means as a central component in program improvement efforts, whether or not such efforts involve linking agents. Miles et al, (1969) have described the utility of a survey feedback approach to organizational change, and Bowers (1973) has demonstrated its effectiveness.

It is useful for the linking agent to develop a perspective on organizations' capacity for growth. Some of the more promising approaches to this are those developed by Jung and his colleagues at Northwest Lab and presented as part of their PETC III training, wherein organizations are characterized as to their relative maturity in a schema paralleling that of developmental psychology for individuals. Likert's Systems 1-4 Framework (1975) presents a well known continuum of organization types. Eiseman (1974) presents an outline for an optimally functioning organization which is determined by the extent to which it is "dynamically homeostatic," "rational," "autonomous," "collaborative," and "committed to improving the quality of life."

Each of these schemas offers a useful way for viewing organizations as whole creatures having dynamic capabilities. Each offers the advantage of being applicable whether the unit of analysis is the district, the building, or the subunit with a building. Unfortunately, Likert's is the only one that to date has specific instrumentation keyed to the model.

During implementation it is probable that one or more people will need to assume a leadership role in order to assure the effort's forward progress. Familiarity with leadership style and issues related to it should be in the store of knowledge of the linking agent. Reviewing the work of Hersey and Blanchard (1977) is perhaps the most efficient way for the interested agent to develop a greater understanding of the function leadership style can play in the success of an effort. Further, it is probable that someone, in many cases the linking agent, will need to play a coordination function, engaging in activities such as division of labor, adjustment of resources, and clarification of roles. Also important are providing support for the action efforts through communication to

individuals in the hierarchy who can endorse or applaud the effort, as well as to those who can facilitate movement to or from the desired direction; soliciting feedback regarding interim success as well as expressions of concern about emerging problems; orchestrating periodic "celebrations" so that participants feel a sense of dynamic movement toward the desired goals; and facilitating goal restatement and adjustment.

Content/Subject Matter Knowledge. This cluster of skills relates to content or subject matter as typically defined. It is important to view process as content at appropriate points, and in many cases the only content expertise that the linking agent must be sure to be on top of is that related to process. The biggest danger for linking agents is the creation of expectations on the part of the client as to the content expertise of the linking agent, expertise on which delivery cannot ultimately be relied. One must convey clearly that one is an expert in identifying and drawing on resources in reading, not that one is a reading expert (unless one is). For the Product Peddler, knowledge of only a specific set of tangibles is called for. For the Information Linker, the content is typically of formal data bases and collections of information. The Program Facilitator is expected to possess a range of general knowledge about a variety of programs and may have in-depth knowledge in knowing where to get it, by employing skills which would be classified in the preceding Resource Utilization skill cluster.

When linking agents find themselves in situations with both long-term potential (e.g., multi-year efforts), and a particular content focus such as reading or special education, it is essential that they develop, as a minimum, familiarity with the main issues in the field, an understanding of the historical trends and roots which have led up to the current state of the art, a grasp of the distinguishing features of particular approaches or conceptual subdivisions in the content area, and knowledge of the acknowledged experts who have name recognition with practitioners and other audiences.

Given that the work of the linking agent is going to occur in school settings where the curriculum is the ranking priority, a cluster of elemental knowledge and skills related to the generic process of curriculum development is essential.[3] Additionally, it is well to have some sense of the distinction between curriculum as the content of education and instruction as the process. Instructional practice and technology is an area where much work has been done that the linking agent can take ready advantage of. The work of Ely and others in the Instructional Development Institute project is exemplary in this regard.

Not all the work of the linking agent will be focused on the classroom as an isolated unit. Therefore, knowledge of, and sensitivity to, the reality of administrators is desirable. Lipham's work in the field is well known, and the 1964 yearbook

of NSSE, Behavioral Science and Educational Administration, presents a reasonable perspective on developments, as well as tracing the history of the field. Since many linking agents will themselves have been former teachers or administrators, the issue of perceived homophily or heterophily should not be ignored in their preparation. These terms refer to the extent to which they are likely to be seen as "more like," i.e., homophilous with, or "more unlike," i.e., heterophilous with, their potential clients. (These terms and their variations should probably head the list of jargon which linking agents should commit to memory for use at professional meetings.)

In addition to the sets of content knowledge noted, given the requirements of most full-bore program improvement efforts, the linking agents should develop a basic understanding of the process of planned change in education.[4]

Evaluation and Documentation Skills. In this cluster are skills related to: designing and conducting formative evaluations, producing data useful to the redirection of the project effort; (occasionally) providing for some sort of summative or impact assessment of outcomes; and documenting the work effort.

Evaluation tends to be viewed negatively by many practitioners. Most of their experiences are bad ones: evaluation activities are disruptive, insensitive to instructional needs and time-consuming, taking time away from teaching; the information provided is over their heads, technically and rarely self-evidently useful to the system, building, or teachers; evaluation is used for "political" purposes, i.e., "proving" minorities are inferior. But increasingly, external agents are able to neutralize these historically negative connotations. Close work with clients has enabled them to elevate the level of discourse, usefully explore ongoing project activities and ultimate impact as well as fruitfully examining the implications of one effort to others.

Linking agents do not need to have an advanced degree in evaluation or research methodology but should possess some fundamental understanding of evaluation concepts, alternative approaches, emergent issues in the field, sources of technical assistance, and tools or instruments for use at various points in the process.[5]

Documentation calls for designing, in appropriate detail, some standardized way of describing events of interest in the effort, analyzing them for insights, teasing out critical incidents which have special relevance for the various audiences of the project, producing written reports at different stages of the process, and identifying potential components of the project which might be more fully described in some kind of packaged material. Some of the foregoing skill clusters are interrelated, as there are ingredients of communication, planning, and problem-solving involved in any evaluation and

documentation work.

Survival Skills. This cluster is, as much as anything else, directed at increasing the level of awareness and legitimizing the everpresent need to "stay alive" in a professional situation. For many people the focus in the short-run will be on coping with crises and foul-ups in the program or dealing with hostile group members in a school. In the long-run, survival takes on a professional development focus of ongoing training and education and of expanding the group of colleagues and friends to whom one can turn for counsel and solace about various matters in one's work and life. Survival also requires maintaining appropriate communication with different levels of the client system, the resource system, and one's own host agency as to one's progress and plans (cf. Arends, 1976).

Herb Shepherd, in a delightful article, "Rules of Thumb for Change Agents," offers the following statement:

> Staying alive means staying in touch with your purpose. It means using your skills, your emotions, your labels and positions, rather than being used by them. It means not being trapped in other people's games. It means turning yourself on and off rather than being dependent on the situation. It means choosing with a view to the consequences as well as the impulse. It means going with the flow even while swimming against it. It means living in several worlds without being swallowed up in any. It means seeing dilemmas as opportunities for creativity. It means greeting absurdity with laughter while trying to unscramble it. It means capturing the moment in the light of the future. It means seeing the environment through the eyes of your purpose.

He offers several corollaries under a "GENERAL RULE NO. 3: NEVER WORK UPHILL." These are:

1. Don't build hills as you go.
2. Work in the most promising arena.
3. Don't use one when two could do it.
4. Don't overorganize.
5. Don't argue if you can't win.
6. Play God a little.

For linking agents, who will generally view themselves and be viewed by others as the expendable factor in the equation, the importance of developing and refining survival skills should be underscored. Naturally, their importance is related to the type

of situation in which one is working, but awareness of their existence and importance is critical.

These nine primary technical skill clusters -- Problem-Solving Skills; Communication Skills; Resource Utilization Skills; Planning Skills; Process Helping Skills; Implementation Skills; Content/Subject Matter Knowledge; Evaluation and Documentation Skills; Survival Skills -- have differential importance for the various linking agent roles previously described. Figure 13 summarizes the writer's best guess of the relative primacy of the skill clusters for effective performance of the ten linking agent roles. In virtually every area, adequate materials exist to provide the knowledge and understanding linking agents need, and suitable training materials can be adapted from existing elements and combined in ways most pertinent to needed skill development for a given linking agent's role(s). Reconceptualization of the elements and their interrelationships by those with an optimistic vision will move us toward the creative blend solutions which are within our reach.

FIGURE 13
RELATIVE PRIMACY OF TECHNICAL SKILL CLUSTERS FOR VARIOUS LINKING AGENT ROLES

LINKING AGENT ROLES	TECHNICAL SKILL CLUSTERS								
	Problem Solving	Communication	Resource Utilization	Planning	Process Helping	Implementation	Content/ Subject Matter	Evaluation/ Documentation	Survival
Product Peddler		+++							+
Information Linker	+	++	+++				++		++
Program Facilitator	+	+++	+	+		+	+	+	++
Process Enabler	+++	+++	++	+++	+++	++	+	+	+++
Provocateur	++	+++	+	++	++	+	+	+	++
Educateur/Capacity Builder	+++	+++	++	+++	++	+++	+	++	+++
Action Researcher / Data Feedbacker	+++	+++	++	++	+++	+++	+	+++	+++
Technical Assister	++	++	++	++	++	++	++	+	++
Information Linker	+	++	+++				++		++
Resource Arranger		+							+

KEY: (blank) skill not essential for effective role performance
+ tertiary skill for effective role performance
++ secondary skill for effective role performance
+++ primary skill for effective role performance

Just as was illustrated earlier by the overlap of the ten roles noted in Figure 8, an inspection of Figures 10 and 13 shows the complementarity of the attributes and requirements for effective performance of the roles. Thus, linking agents should be able to discern qualities and skills in their colleagues which are

incorporated in their own primary role(s), that is, there is a bit of them in each of their counterparts. Understanding and appreciating how this connects all linking agents together is a subtle piece of the reconceptualization needed for the contraption to work.

THE LINKING AGENT IN ACTION.

In the preceding subsections, a number of issues related to the multiple roles of linking agents, attributes to be assessed in their initial selection, and primary technical skill clusters to be developed through an ongoing training program have been presented. Sections I and II painted the larger context in broad strokes and called for attention to knowing the resource system; diagnosing and comprehending a complex client system; and functioning in a productive way within a host agency whose primary mission was not likely to be that of linking. It would be possible at this point for us to have a squadron of fully-knowledgeable and well-trained linking agents ready to work with an array of client systems and able to draw on a rich reservoir of resources. Even with a squadron, "the whole thing" could never come together in an integrated effort.

The contraption can work, both in particular program improvement efforts and in larger systems for preparing and supporting such individuals and efforts (Culbertson, 1977). At this point in the document it may be helpful to discuss four issues relating to putting the schema in motion and maximizing its chance for success. These four issues are:

1. Assessing why action-intents do not lead to action-effects.

2. The function of collaboration and the development of an inside/outside team.

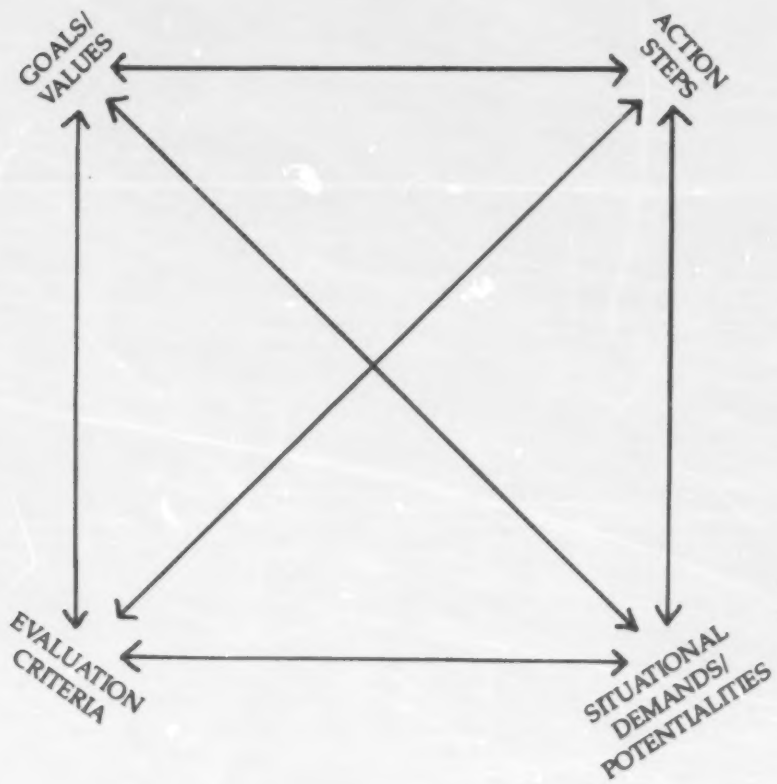
3. The phases of the relationship with the client system.

4. The complexity of the implementation process.

Each of these issues could, in itself, be the subject of an entire article, so they will simply be sketched out here. They constitute matters which need attention by the linking agent and those concerned with both management and policy.

Assessing Why Action-Intents Do Not Lead to Action-Effects. This phenomenon characterizes more of human endeavor than most of us would care to acknowledge. Despite the most well-conceived and carefully articulated plan on the part of linking agents, the intended outcomes will almost never be achieved. Rather than lowering our expectations and resigning ourselves to never achieving our goals, it is more productive to refine the ways we examine what is going on so that adjustments can be made from one time to the next. Eiseman has formulated the following diagram to explain this phenomenon.

FIGURE 14
WHY ACTION-INTENTS DO NOT LEAD
TO ACTION-EFFECTS



In the corners of Figure 14 are four primary clusters into which virtually all aspects of a transaction involving one or more people can be assigned. The three generic problems that result in intention-effects discrepancies are,

1. There may be a lack of clarity with respect to the elements of any one of the four major clusters.

2. There may be a conflict within a cluster between its elements.

3. If there is clarity and no within-cluster conflict, there may be lack of congruence between any of the four clusters.

In order for action-intents to lead to the desired action-effects, all four clusters must be clear, internally consistent, and congruent. If one views them in a logical sequence, while

recognizing that in any given instance their interactions do not necessarily follow this sequence, one can see that the goals and values underlying an effort provide the momentum leading to the action steps. These, when taken, push up against the situational demands and potentialities in a way which, depending on the feedback mechanisms, may modify any of the preceding steps. As the action steps are inevitably transformed by the situational factors, the explicit and implicit evaluation criteria influence the perception of relative success or achievement of the desired outcome(s) for the actor as well as the observer. Any breakdown or lack of congruence between or within any of the four clusters as they interact in a dynamic process will, in more cases than not, produce a shortfall. And, of course, we can only have an imperfect knowledge of the future.

Like all elementary paradigms, this one can serve as an easy-to-employ checklist which linking agents can use to review the completeness of each cluster and of the probable interaction of the essential elements, or at least their (and relevant others') understanding of each cluster. Procedures drawn from the skill clusters noted earlier could be employed to produce clarity on the content of each cluster, as well as to check and recheck for congruence between clusters.

Developing an Inside-Outside Team. Virtually all of the major writers in the field and observers of the educational change process encourage the development of an inside-outside team in any intervention. (Havelock, 1973; Jung, d.u.; Schindler-Rainman and Lippitt, 1975.) In most cases the linking agent is the outsider to the system; the insiders are those participants relevant to a particular effort. These authors discuss the advantages and disadvantages of the insider versus the outsider as a change agent; they suggest that the optimal solution is one which combines both so as to derive the benefits and avoid the disadvantages of each.

Among the operational difficulties for linking agents will be identifying appropriate members of the team, assisting them in becoming more skillful in using external resources (including the linking agent), expanding or contracting the composition of the team to take into account changing requirements of the ongoing process, maintaining communication with the constituencies represented by the inside members so that the inside team does not become viewed as a special interest group bent on achieving its own individual purposes, guarding against the group becoming captivated by its own good relations in a way that effectively impedes active work on the original purpose, and shifting the linking agents' role within the group as the relationship develops in order to maximize its long-term effectiveness (see Cartwright and Zander, 1968).

In our own work at The NETWORK, we have been confronted with a reality related to participation. Like many of our colleagues, we believe in increased involvement of teachers and parent/community

members in educational decision-making. Thus, in a number of our projects we have specified involvement of representative members of these constituencies as a quid pro quo for our engagement with the school. Our experience has demonstrated the necessity of being flexible on this point. Many program innovations are of such modest scope that either extensive involvement with a number of teachers or any involvement at all by parents or community members is dysfunctional. These publics simply do not have a meaningful role if the matter under consideration is an innovation or a set of possible innovations which can be adopted by a single teacher and implemented without any fundamental shift in the values promoted by the program. Hence, conscious reflection upon one's values and the extent to which they impose inappropriate conditions on a given situation should be urged.

The notion that the inside-outside team is a tremendously useful vehicle for ensuring the success of a change effort is usually accompanied by a belief that collaboration is a preferable mode of behavior between professionals engaged in such efforts. Many of us espouse collaboration in our work with schools and try to promote it. What is increasingly clear is that there is substantial ambiguity about exactly what collaboration is.[6]

Collaboration seems to aim for a win-win situation as opposed to one in which there is a single victor or everyone loses. The winning or losing can apply to goals (of a project) or any other components or activities. As such, it is a phenomenon at work at several different levels simultaneously, and a favorite forum for promoting it is decision-making settings or group meetings. Here, most professionals attempt to effect "consensus." The "consensus," though rarely actually tested, is often ascribed to groups which produce near unanimous decisions on one or more issues. However, the main point to be made at this juncture, given the constraints of space, is that collaboration is not the strategy of choice in every instance; pros and cons can and should be articulated before it is promoted. Indeed, there are many instances where a collaborative strategy is counter-productive. Eiseman (JABS, 1977), drawing from Thomas, identifies five strategies (avoidance, competition, accommodation, compromise, and collaboration) and suggests they be employed selectively depending upon the favorability of "the collaborative climate." Peabody and Dietterich (1973) identify three strategies: collaboration, negotiation, and coercion, to be employed under different circumstances. Again, the primary point is that virtually all aspects of the individual situation, including explicit identification of the self-interests of relevant parties, especially the linking agent, need to be assessed before we develop collaborative skills for ourselves and our clients and work to develop conditions favorable to collaboration in our work. However, the realities in contemporary schools are simply not presently as rosy as we might wish.[7]

Phase of the Relationship with the Client System. Stressing that what is of critical importance is the awareness with which the

linking agents view all aspects of their working situation, let us turn to the topic of the phases of the relationship. It is possible to look at any relationship between two people, break it into (either a few or a great many) component parts, and then array them in a chronological sequence. Awareness of where one is in one's relationship with a client will aid linking agents in determining the best move to make at a given point. The important thing is not what the particular framework is, but that it is a planful one, workable and useful for particular linking agents. Lippitt and Lippitt (1975) identify four major phases in the consultation process:

1. The phase of contact, entry, and relationship establishment.

2. The phase of contract formulation and establishment of a work relationship. (It should be noted here that contract does not necessarily imply a legal document only, but also includes the psychological contract.)

3. A phase of planning the goals and steps of problem-solving for the change effort.

4. A phase of the action-taking and continuity of effort.

Under each of these four major phases, the authors outline 14 specific "work foci" such as: helping identify and clarify the need for change, exploring the readiness for change, planning for involvement. They discuss these in light of the advantages or disadvantages facing the inside or the outside consultant. In an earlier version (1973) of this document, the Lippitts delineated some 26 specific dilemmas and related them to 11 major phases of the relationship. These dilemmas include the power dilemma, legitimization dilemma, and entry dilemma.

Havelock (1973) has described six major stages of the planned change process:

1. Building the relationship

2. Diagnosis

3. Acquiring relevant resources

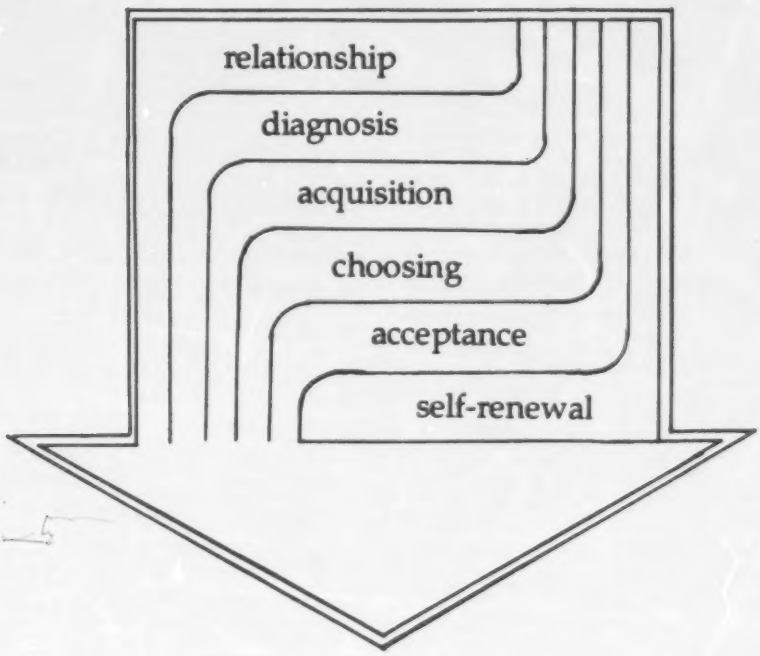
4. Choosing the solution

5. Gaining acceptance

6. Stabilizing the innovation and generating self-renewal.

These stages are viewed as sequential but have permeable boundaries between them as suggested by Figure 15.

FIGURE 15
PHASES OF THE RELATIONSHIP



Reprinted by permission of the publisher from R. Havelock, The Change Agent's Guide to Innovation in Education. Englewood Cliffs, New Jersey: Educational Technology Publications, Inc., 1973, cover. (c) 1973 by Educational Technology Publications, Inc.

Implementation Issues. The increasing importance being given to understanding the process of implementation was noted earlier. In part, this increased attention is due to the realization that often the innovation which is reported to be in place is not, upon inspection, being implemented. (Goodlad, 1975; Gross et al, 1971; Hall and Loucks, 1975). A related difficulty, not addressed here, lies in specifying exactly what the core components of the innovation are so that upon observation one knows what one should be seeing. Fullan (1975), in a useful paper commissioned by the International Management Training for

Educational Change (IMTEC) Project in Europe, addressed the question of implementation as "The putting into practice of the essential characteristics of innovation." He identified four dimensions as related to determining the extent to which an innovation has been implemented:

1. The structure
2. The role and/or behavior of participants
3. Knowledge and understanding as related to the innovation
4. Values internalized

He notes that the first two dimensions are directly observable, while the second two require drawing inferences from observation or interrogation. Fullan makes the point that much attention to date has been on studying outcomes. These studies attempt to ascertain by observation or questioning whether the innovation, which is rarely defined fully in terms of the four dimensions noted above, can be said to be in place. What is not typically studied is the implementation process, leading up to or contributing to the attainment of the outcome.

Ten factors are important to implementation, according to Fullan and Pomfret (1975). Worthy of special emphasis is the desirability of establishing mechanisms to

> co-define the nature of the innovation in practice, continuing in-service training during initial implementation, providing resource support during implementation as well as in the predecisional phase, establishing feedback mechanisms to allay anxiety and address power relationships between the givers and receivers of feedback, the importance of developing a capacity to use the innovation, utilizing alternative evaluation approaches so that data facilitates implementation and involves clients in the process. (Fullan and Pomfret, 1975)

Also noted, and related to a study by Pincus (1974), is the matter of providing incentives. While Pincus has spoken to the need to provide incentives for school districts to do what they don't want to do, Gross (1971) as well as Fullan focus on creating explicit payoffs for teachers and adopters so that they will be motivated to go beyond a superficial or routine adoption (see Hall et al, 1975).

These issues, of course, will be of primary concern to linking agents who concentrate on later phases of program improvement efforts. But anyone entering the school setting should at least be cognizant of these issues to avoid being tripped up by fantasies about the rationality and realities of schools as innovating units.

WHERE DO WE GO FROM HERE?

In this article, I have attempted to present a relatively complete overview of the issues which, in my opinion, need to be considered in developing training programs and support mechanisms for an anticipated crop of linking agents. For some this paper will suffice; for others, concerned with the collection of materials and design of experiences related to creating new knowledge for themselves or for linking agents, attention should be focused on developing educational experiences based on any one of the subsystems discussed earlier.

For those concerned with recruiting and selecting linking agents, attention should be focused first on developing a tailored set of prerequisite attributes. These can then be related to selected technical skill clusters, chosen for their relevance to particular linking agent roles, e.g., those described previously or combinations thereof. For those concerned with skill development itself, attention should be directed to acquiring a thorough grasp of the available resources for those skill clusters that are pertinent to the given situation and designing training programs which build upon them. Individuals exist who can themselves be categorized in one of the ten roles described and who can assist in any one or more of these ways. In all cases, purposeful efforts must be mounted to develop a support system for linking agents and to sustain it.

In this paper, I have attempted to argue that our best opportunity lies in establishing a pragmatic, eclectic, and flexible framework which maximizes the adaptation of existing resources and induces tolerance for a range of suitable solutions to the problem of training and supporting linking agents. What we need are great groups of generalists who specialize in Resource Utilization, and among the critical resources which they must know how to utilize are blends of other technical skills drawn on as appropriate in given client situations. At a minimum, it is necessary to know what one does not know, and at the maximum, to begin working for oneself and others in order to expand one's repertoires of knowledge and of skill. So one who wishes to become the complete linking agent develops a plan to acquire a broad array of understandings and skills, including:

- A sense of history about the field of dissemination and educational program improvement.

- Knowledge of past, current, and emerging federal and state programs concerned with these topics.
- Knowledge of the literature of planned change, behavioral science, and curriculum theory.
- Knowledge of and access to sources of programs, products and information.
- Understanding of the quality control issues, ethical issues, and value issues inherent in such work.
- Understanding the many facets of an innovation as perceived by potential clients.
- Awareness of oneself as an innovation.
- Developing and using a systematic view of the client system.
- Developing and refining a knowledge of organizational dynamics, especially those peculiar to schools.
- Developing an understanding of, and skills in managing, the "mutual adaptation" process.
- Developing skills in diagnosing various aspects of organizations.
- Developing means of assessing and promoting the growth of the clients with whom they work.
- Fostering the development of a collaborative climate within which to work and be housed.
- Employing data collection and feedback procedures to guide an effort and to elevate the level of discourse.
- Developing a consciousness as to the presence and relevance of various personal and intrapersonal attributes of oneself and others.
- Developing mechanisms for clarifying, negotiating, and renegotiating one's own role(s).
- Securing and refining a range of technical skills appropriate to one's role.
- Developing and effectively using a range of formal and informal support mechanisms.
- STAYING ALIVE!

Clearly the arena is sufficiently large that it is impossible to describe one single solution. The means presently exist whereby those interested can move to action with somewhat greater clarity as to where they are headed. Leadership is needed to mobilize the available resources to take the next steps.

We may be on the verge of achieving a major breakthrough in the area of educational program improvement. From my vantage point, the true measure and significance of our efforts now will be determined by the extent to which we build on the best of the past. We must continue to work toward the ambitious goal of substantially improving the educational enterprise. Where there are surely places for linking agents of all sorts, I hold that we have an obligation to work toward a future where linking agents will be capable of:

> interacting with client systems and their key members in ways that lead to. . .
>
> identifying/specifying high priority problems collaboratively, the solutions to which call for. . .
>
> mobilizing internal or external resources (people, programs, information, etc.) which are brought to bear on the problems by. . .
>
> implementing a collaboratively developed plan which takes into account:
>
> 1. the history and current context of the organization
> 2. the interests of those affected by the change, even when unarticulated
> 3. the need for adequate documentation so that others may learn from the experience. . .
>
> challenging the client system to reflect upon its experiences in such ways as are likely to enduce a long-term problem-solving capacity.

With good fortune and concentrated efforts, we can create such a future. How to do so is a problem more complex than many, but every bit as solvable.

FOOTNOTES

[1] AERA (American Educational Research Association); ASCD (Association for Supervision and Curriculum Development); The OD (Organizational Development) Network; ASTD (American Society for Training and Development); ASIS (American Society for Information Science).

[2] Among the most helpful sources which should be inspected by the interested reader are Diagnosing the Professional Climate of Schools by Fox et al. (1973), a series of instruments developed for use in the COPED Project and the series of checklists developed by Havelock to accompany A Guide to Innovation (available only in ERIC ED056256).

A group of reference tools of immense utility to those with a behavioral science orientation or inclination are the Reference Guide to Handbook and Annuals (1979), and A Handbook of Structured Experiences for Human Relations Training (1979) by Pfeiffer and Jones. The Schmuck and Runkel Handbook of Organization Development in Schools (1972) is also a valuable source of diagnostic instruments. Lake and Miles, in their recent compendium, Measuring Human Behavior (1973), bring together and review a vast array of instruments useful to change practitioners, as do Pfeiffer and Heslin in their Instrumentation in Human Relations Training (1973, 1976).

[3] As an initial text, Tyler's classic Basic Principles of Curriculum and Instruction (1969) remains as good a starting point as any. Goodlad (1966) has extended the early work of Tyler in a useful way.

[4] Seminal works reflecting the dominant social psychological perspective include Lippitt, Watson, and Westley's Dynamics of Planned Change (1958); Miles' Innovations in Education (1964); and Bennis, Benne, and Chin's The Planning of Change, Volume I (1961), Volume II (1969), Volume III (1976). Another important entry in this tradition is The Laboratory Method of Changing and Learning: Theory and Application (1975) by Benne, Bradford, Gibb, and Lippitt.

In terms of research specifically directed at program improvement efforts in schools, the most notable are Sieber and Seashore's study of the Pilot State Dissemination effort (1972); Louis and Sieber's Bureaucracy and the Dispersed Organization: The Educational Extension Agent Experiment (1979); Goodlad's I/D/E/A series (1975) based on the five years of the League of Cooperating Schools in Southern California, and the Rand Change Agent Studies (1975) of federally-sponsored innovative projects. Related entries are the oft-ignored Oregon

Studies (Schalock et al, 1972) and Schmuck et al, Handbook of Organizational Development in Schools (1972). Piele's recent summary is also of particular interest to linking agents.

There are also a few useful educational or training packages or programs. Virtually all have been supported with federal money. Havelock's Change Agent's Guide to Innovation in Education (1973) and Havelock and Havelock's Training for Change Agents (1973) draw upon the vast compendium of research conducted by him and his colleagues at the Institute for Social Research in its Center for Research on Utilization of Scientific Knowledge (CRUSK). Mick, Paisley, et al., produced three volumes as part of an early (aborted) effort to establish a training program for educational extension agents (1973). Banathy et al., at the Far West Lab, developed an extensive six-volume modular series directed at para-professionals in Development, Dissemination, and Evaluation (1972). Previously noted is the output of Northwest Regional Laboratory's Improving Teacher Competencies Program, presently packaged as the PODS Program (Preparing OD Specialists). The Lab's products constitute an extensive sequential training effort for individuals who wish to work as change agents in educational settings.

Fortunately, a current effort funded by NIE will enable these products to be modularized and tailored to the specific needs of linking agents. The Center for Educational Policy and Management (CEPM, formerly CASEA) as well as Research for Better Schools, Inc., (RBS) have also produced publications or training materials of interest to linking agents. A useful guide to these and other materials developed by the Labs and Centers is the Educational Dissemination and Linking Agent Source Book (1976), a product of the Cooperative Interlab Project sponsored by NIE.

[5]The 1969 yearbook of the National Society for the Study of Education, edited by Ralph W. Tyler, Educational Evaluation: New Roles, New Means, provides a useful introduction. The Office of Planning, Budgeting and Evaluation of USOE (now the Office of Evaluation and Dissemination) has published four very helpful monographs on evaluation in education: A Practical Guide to Measuring Project Impact on Student Achievement, A Procedural Guide for Validating Achievement Gains in Educational Projects, The Resource Approach to the Analysis of Educational Project Cost, and The Use of Sampling Procedures with the USOE Title I Evaluation Model.

[6]Indeed, a recent search of the literature did not turn up any operational definition of the term, let alone good descriptions or analyses of it in practice.

[7]My recent case study of our experience with collaboration in The NETWORK, "An Executive Director's Struggle to Actualize His Commitment to Collaboration" reviews our frustration (JABS, 1977).

REFERENCES

Arends, R. Assumptions about Linkers and Sets of Skills to be Considered Essential for Linkers to Be Effective on a Sustained Basis. Portland: Northwest Regional Educational Laboratory, mimeographed, 1976.

Argyris, C. Integrating the Individual and the Organization. New York: Wiley, 1964.

Argyris, C. In Cooper, C. Theories of Group Process. New York: Wiley, 1975.

Argyris, C. Increasing Leadership Effectiveness. New York: Wiley, 1976(a).

Argyris, C. Theories of Action that Inhibit Individual Learning. American Psychologist, 1976, 31, (9), 638-654, (b).

Argyris, C. Leadership, Learning, and Changing the Status Quo. Organizational Dynamics, Winter 1976, 4 (3), 29-60, (c).

Argyris, C., & Schon, D. Theory in Practice: Increasing Professional Effectiveness. San Francisco: Jossey-Bass, 1974.

Baldridge, J.; Deal, T.; and Ancell, M. (Eds.) Managing Change in Educational Organizations. Berkeley: McCutchan, 1975.

Barnes, F. National Educateur Program: A proposal submitted for consideration to the U.S. Dept. of Justice. New Canaan, N.Y.: Berkshire Farm Institute for Training and Research, 1975.

Bass, B. A Systems Survey Research Feedback for management and Organizational Development. Journal of Applied Behavioral Science, April, May, June 1976, 12, (2), 215-229.

Benne, K.; Bradford, L.; Gibb, J.; and Lippitt, R. (Eds.). The Laboratory Method of Changing and Learning: Theory and Application. Santa Clara: Science and Behavior, 1975.

Bennis, W.; Benne, K.; and Chin, R. (Eds.) The Planning of Change (1st ed.). New York: Holt Rinehart Winston, 1961.

Bennis, W.; Benne, K.; and Chin, R. The Planning of Change (2nd ed). New York: Holt Rinehart Winston, 1969.

Bennis, W.; Benne, K.; Chin, R.; and Corey, K. The Planning of Change, (3rd ed.). New York: Holt Rinehart Winston, 1976.

Bentzen, M., et al. Changing Schools: The Magic Feather Principle. New York: McGraw Hill, 1974.

Berman, P., and McLaughlin, M. Federal Programs Supporting Educational Change. Rand Change Agent Series, Santa Monica, California: Rand Corporation, 1974.

Bowers, D. OD Techniques and Their Results in 23 Organizations: The Michigan ICL Study. Journal of Applied Behavioral Science, 1973, 9, (1), 21-42.

Cartwright, D., and Zander, A. (Eds.). Group Dynamics. New York: Harper Row, 1968.

Coleman, J. Conflicting Theories of Social Change. American Behavioral Scientist, May 1971, 14, (5), 633-650.

Corwin, R. Models of Educational Organizations. In Review of Research in Education, Vol. 2 Itasca, Illinois: Peacock, 1974.

Crandall, D. An Executive Director's Struggle To Actualize His Commitment to Collaboration. Journal of Applied Behavioral Science, Vol. 13, 1977.

Crandall, D. "Training and Supporting Linking Agents" Linking Processes in Educational Improvement, edited by Nash and Culbertson, UCEA, 1977.

Crandall, D., et al. Solving Today's Problems -- Coping With Tomorrow's World: Developing New Approaches to Occupational Competence. Merrimac, Massachusetts: The Network of Innovative Schools, mimeographed, 1974.

Crandall, D., and Eiseman, J. Criteria for the Selection of Linking Agents. Merrimac, Massachusetts: The Network of Innovative Schools, mimeographed, 1971.

Culbertson, J. "Linking Agents and the Sources and Uses of Knowledge" Linking Processes in Educational Improvement, edited by Nash and Culbertson, UCEA, 1977.

Culbertson, J. "A Nationwide Training System for Linking Agents in Education" Linking Processes in Educational Improvement, edited by Nash and Culbertson, UCEA, 1977.

Dissemination Analysis Group. Report of the Dissemination Analysis Group to the Dissemination Policy Council. Washington, D.C.: HEW, Office of the Assistant Secretary of Education, 1976.

Educational Labs & R&D Centers for the National Institute of Education. Educational Dissemination and Linking Agent Sourcebook. San Francisco: Far West Lab, 1976.

Eiseman, J. My Professional Focus. Amherst, Massachusetts: University of Massachusetts, mimeographed, 1974.

Eiseman, J. A Third Party Consultation Model for Resolving Recurring Conflicts Collaboratively. Journal of Applied Behavioral Science, Vol. 13, 1977.

Eiseman, J. Reconciling Incompatible Positions. Journal of Applied Behavioral Science, Vol. 14, 1978.

Engel, J.; Wales, H.; and Warshaw, J. Promotional Strategy (3rd ed.). Homewood, Illinois: Irwin, 1975.

Ewing, D. Writing For Results: In Business, Government and the Professions. New York: Wiley & Sons, 1974.

Fairweather, G. Social Change: The Challenge to Survival. Morristown, N. J.: General Learning Press, 1972.

Farr, R. Knowledge Linkers and the Flow of Educational Information. In Far West Lab, The Educational Information Consultant: Skills in Disseminating Educational Information Training Manual. Berkeley: Far West Lab, 1971.

Far West Lab. Educational Programs That Work. San Francisco: Far West Lab, 1976.

Far West Lab. Technical Writing: Informal Documents in Series 3, Section 3.3 A Training Program in Educational Development, Dissemination, and Evaluation. Berkeley: Far West Lab, 1974.

Far West Lab. Technical Writing: Formal Documents in Series 3, Section 3.4 A Training Program in Educational Development, Dissemination, and Evaluation. Berkeley: Far West Lab, 1974.

Far West Lab. A Training Program in Educational Development, Dissemination, and Evaluation. Berkeley: Far West Lab, 1972.

Fox, R.; Schmuck, R.; Van Egmond, E.; Ritvo, M.; and Jung, C. Diagnosing the Professional Climate of Schools. Fairfax, Virginia: NTL Learning Resources Corp., 1973.

Fullan, M. Overview of the Innovative Process and the User. Interchange, 1972, 3, (2-3), 1-46.

Fullan, M. IMTEC: Implementation: Its Nature and Determinants. Oslo: Decentralised Project No. 4, (Special activity), International Management Training for Educational Change (IMTEC), 1975.

Fullan, M., and Pomfret, A. Research on Curriculum and Instruction Implementation. Review of Educational Research, Vol. 47, No. 2.

Giacquinta, J. The Process of Organizational Change in Schools. In F. Kerlinger, (Ed.), Review of Research in Education, Vol. 1. Itasca, Illinois.: Peacock, 1973.

Giacquinta, J. Status Risk-Taking: A Central Issue in the Initiation and Implementation of Public School Innovations. Journal of Research and Development in Education. 1975, 9, (1), 102-114.

Glaser, E., and Taylor, S. Factors Influencing the Success of Applied Research. American Psychologist, Feb. 1973, 140-146.

Goodlad, J. School, Curriculum, and the Individual. Waltham, Massachusetts: Blaisdell, 1966.

Goodlad, J. Institute for Development of Educational Activities (I/D/E/A) Series on Educational Change: 6 Volumes. New York: McGraw Hill, 1975.

Goodlad, J. The Dynamics of Educational Change. Part of I/D/E/A series, New York: McGraw Hill, 1975.

Greenfield, T. Organizations as Social Inventions: Rethinking Assumptions About Change. Journal of Religion and Health. 1973, 9, (5), 551-574.

Greenfield, T. Theory in the Study of Organizations and Administrative Structures. Presented at Annual Meeting of the International Intervisitation Programme on Educational Administration (3rd). Bristol, England: July, 1974.

Gross, N. et al. Implementing Organizational Innovations. New York: Basic Books, 1971.

Hall, G.; Loucks, S.; Rutherford, W.; and Newlove, B. Operational Definitions of the Levels of Use of the Innovation (LOU) Chart. Austin, Texas: Teachers Education Center, University of Texas. 1975.

Hall, G., and Loucks, S. A Developmental Model for Determining Whether or Not the Treatment Really is Implemented. Austin, Texas: Research and Development Center for Teacher Education, University of Texas, 1976.

Handy, C. Understanding Organizations. Harmondsworth, England: Penguin, 1976.

Harrison, R. Role Negotiation: A Tough-minded Approach to Team Development. In Burke, W., and Hornstein, H. (Eds.), The Social Technology of Organizational Development. La Jolla: University Associates, 1972.

Havelock, R. The Change Agent's Guide to Innovation in Education. Englewood Cliffs, N. J.: Educational Technology, 1973.

Havelock, R. A Workbook of Checklists to Accompany A Guide to Innovation. (ERIC Document Reproduction Service No. ED 056-256).

Havelock, R., and Guskin, A., et al. Planning for Innovation. Ann Arbor, Michigan: Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, 1969.

Havelock, R., and Havelock, M. Training for Change Agents. Ann Arbor, Michigan: Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, 1973.

Hersey, P., and Blanchard, K. Management of Organizational Behavior: Utilizing Human Resources (3rd ed.). Englewood Cliffs, N. J.: Prentice Hall, 1977.

Jackson, P. Life in Classrooms, New York, Wiley, 1968.

Kaufman, R. Identifying and Solving programs: A System Approach. La Jolla, California: University Associates, 1976.

Jung, C.; Pino, R.; and Emory, R. Research Utilization Problem Solving, (RUPS), Portland, Oregon: Northwest Regional Educational Lab, 1970.

Koberg, D., and Bagnall, J. The Universal Traveler. Los Altos, California: William Kaufman, 1972.

Kotler, P. Marketing for Nonprofit Organizations. Englewood Cliffs, N. J.: Prentice Hall, 1975.

Lake, D., and Miles, M. Measuring Human Behavior. New York: Teachers College press, Columbia University, 1973.

Lieberman, A. "Linking Processes In Educational Change" Linking Process in Educational Improvement, edited by Nash and Culbertson, UCEA, 1977.

Likert, R. Systems 1-4 Framework. In Likert, R. New Ways of Managing Conflict. New York: McGraw Hill, 1976. 20-34.

Lippitt, R. Linkage Problems and Process in Laboratory Education. In Benne, et al., (Eds.), The Laboratory Method of Changing and Learning. Palo Alto, California: Science and Behavior, 1975.

Lippitt, G. Visualizing Change. La Jolla, California: University Associates, 1973.

Lippitt, R., and Lippitt, G. Consulting Process in Action. Washington, D.C.: Development Publishers, 1978.

Lippitt, R.; Watson, J.; and Westley, B. Dynamics of Planned Change. New York: Harcourt, Brace and World, 1958.

Lortie, D. School Teacher. Chicago: University of Chicago, 1975.

Mick, C.; Paisley, M.; and Paisley, W. Developing Training Materials for Educational Extension Services Personnel. Stanford, California: Stanford University & Systems Development Corporation, 1973.

Miles, M. (Ed.). Innovations in Education. New York: Teachers College Press, Columbia University, 1964.

Miles, M. Planned Change and Organizational Health: Figure and Ground. In J. Baldridge, and T. Deal, et al., (Eds.)., Managing Change in Educational Organizations. Berkeley: McCutchan, 1975.

National Institute of Education. A Dissemination Special Relationship Request for Proposal (RFP) to Establish an "R&D Dissemination and Feedforward System: A Consortium of R&D Producers Disseminating and Gathering Consumer Oriented Information About R&D Products and Outcomes." Washington, D.C.: National Institute of Education, 1976.

National Institute of Education. Catalog of NIE Educational Products, 2 vols. Washington, D.C.: U.S. Government Printing Office, 1975.

National Institute of Mental Health. Planning for Creative Change in Mental Health Services: A Manual on Research Utilization. Washington, D.C.: U.S. Government Printing Office (DHEW No. HSM 71-9059), 1971.

National Society for the Study of Education (NSSE). Educational Evaluation: New Roles, New Means. R. Tyler (Ed.), Chicago: University of Chicago, 1969.

National Society for the Study of Education (NSSE). Behavioral Science and Educational Administration. D. Griffiths (Ed.), Chicago: University of Chicago, 1964.

National Special Media Institute. Selecting Instructional Strategies and Media. Part of Instructional Development Institute Series. Washington: National Special Media Institute, 1972.

National Training Laboratories. Problem Solving. Bethel, Maine· National Training Laboratories.

Network of Innovative Schools. Organizational Needs Inventory. Merrimac, Massachusetts: The NETWORK, mimeographed, 1973.

Northeast/Mid-Atlantic PIP Diffusion Project. Project Information Packages: Overview. Merrimac, Massachusetts: The NETWORK, 1976.

Office of Strategic Services, Assessment of Men: Selection of Personnel for the Office of Strategic Services (reprint of 1948 edition). New York, N. Y.: Johnson Reprint Corporation, 1969.

Owens, R. Organizational Behavior in Schools. Englewood Cliffs, N. J.: Prentice Hall, 1970.

Pareek, U. Interrole Exploration. in J. Pfeiffer and J. Jones (Eds.), The 1976 Handbook for Group Facilitators. La Jolla, California: University Associates, 1976.

Peabody, G., & Dietterich, P. Powerplay, a Simulation Dealing with Collaboration, Negotiation, and Coercion. Naperville, Illinois: Powerplay, Inc., 1973.

Pfeiffer, J., and Jones, J. Annual Handbooks for Group Facilitators, 6 volumes. La Jolla, California: University Associates, 1971-1976.

Pfeiffer, J.; and Jones, J. A Handbook of Structured Experiences for Human Relations Training, 7 volumes. La Jolla, California: University Associates, 1969, 1974.

Pfeiffer, J.; Heslin, R.; and Jones, J. Instrumentation in Human Relations Training. La Jolla, California: University Associates, 1973, 1976.

Piele, P. Review and Analysis of the Role, Activities, and Training of Educational Linking Agents. Final Report. Eugene, Oregon: ERIC Clearinghouse on Educational Management, 1975. (ED. 128871).

Pincus, J. Incentives for Innovations in the Public Schools. Review of Educational Research, 1974, 44, (1), 114-138.

Pondy, L. Beyond Open System Models of Organization. Presented at Annual Meeting of the Academy of Management. Kansas City, Missouri: August 12, 1976. (a)

Pondy, L. Leadership as a Language Game. In M. McCall, and M. Lombardo, (Eds.), Leadership, Where Else Can We Go? Durham, N. C.: Duke University Press, 1976. (b).

Rogers, E. Diffusion of Innovations. New York: Free Press, 1962.

Rogers, E. M. and Shoemaker, F. F. Communication of Innovations: A Cross-Cultural Approach. New York: Free Press, 1971.

Runkel, P. and Schmuck, R. Findings From the Research and Development Program on Strategies of Organizational Change at CEPM-CASEA. Eugene: University of Oregon, 1974.

Runkel, P., et al. Strategies of Organizational Change Program, Bibliography on Organizational Change in Schools. Eugene, Oregon: Center for Educational Policy and Management, 1974.

Sarason, S. B. The Culture of the School and the Problem of Change. Boston: Allyn Bacon, 1971.

Schalock, H.; Thomas, G.; Morse, K.; Smith, C.; and Ammerman, H. The Oregon Studies in Educational Research, Development, Diffusion, and Evaluation. Monmouth, Oregon: Teaching Research, 1972. Vol. I-V.

Schindler-Rainman, E. and Lippitt, R. Designing for Participative Learning and Changing. In Benne, et al., (Eds.), The Laboratory Method of Changing and Learning. Palo Alto: Science and Behavior Books, 1975.

CEPM: Schmuck, R. Situation-Target-Path. Eugene: Center for Educational Policy Management.

Schmuck, R. A.; Runkel, P. J.; Saturen, S. L.; Martell, R. T.; and Derr, C. B. Handbook of Organizational Development in Schools. Palo Alto: Mayfield, 1972.

Schmuck, R. and Miles, M. Organization Development in Schools. Palo Alto: National Press, 1971.

Sherwood, J. J. and Glidewell, J. C. Planned Renegotiation: A Norm-Setting OD Intervention. Lafayette: Purdue University, Institute for Research in the Behavioral, Economic, and Management Sciences, 1971.

Shepherd, H. Rules of Thumb for Change Agents. The Staff Specialist as an Internal Consultant. Washington, D. C.: Organization Renewal, Inc., 1973.

Smith, L. M. and Keith, P. M. Anatomy of Educational Innovation: An Organizational Analysis of an Elementary School. New York: Wiley, 1971.

Sieber, S. Organizational Influences on Innovative Roles. In J. F. Baldridge and T. Deal (Eds.), Managing Change in Educational Organizations. Berkeley: McCutchan, 1975. (article first appeared in 1968.)

Sieber, S.; Seashore, K.; and Metzger, L. The Use of Educational Knowledge: Evaluation of the Pilot State Dissemination Program. New York: Bureau of Applied Social Research, Columbia University, 1972.

Sieber, S. Toward a Theory of Role Accumulation. American Sociological Review, 1974(a) 39 (August): 567-78. A-621 of Bureau of Applied Social Research, Columbia University.

Sikorski, L. A. and Hutchins, C. L. A Study of the Feasibility of Marketing Programming for Educational R&D Products. San Francisco: Far West Lab, 1974.

Toffler, A. Future Shock. New York: Random House, 1970.

Turnbull, B. et al. Exemplary Practice: A Report on Recent Searches. Office of Dissemination and Resources, NIE, 1975.

Tyler, R. W. Basic Principles of Curriculum and Instruction. Chicago: University of Chicago, 1969.

USOE. Sharing Educational Success. National Association of State Advisory Council Chairmen, State Departments of Education. mimeographed.

USOE. A Practical Guide to Measuring Project Impact on Student Achievement. Number 1 in a series of Monographs on Evaluation in Education. No. 017-080-01460. Washington: U.S. Government Printing Office.

USOE. A Procedural Guide for Validating Achievement Gains in Educational Projects. Number 2 in a series of Monographs on Evaluation in Education. No. 017-080-01516. Washington: U.S. Government Printing Office.

USOE. The Resource Approach to the Analysis of Educational Project Cost. Number 3 in a series of Monographs on Evaluation in Education. No 017-080-01914. Washington: U.S. Government Printing Office.

USOE. The Use of Sampling Procedures with the USOE Title I Evaluation Model. Number 4 in a series of Monographs on Evaluation in Education. No. 628-097/1992. Washington: U.S. Government Printing Office.

Waller, W. The Sociology of Teaching. New York: John Wiley and Sons, 1932.

Woodbury, M. A Guide to Sources of Educational Information. Washington, D.C.: Information Resources Press, 1976.

Zaltman, G.; Duncan, R.; and Holbek, J. Innovations and Organizations. New York: Wiley & Sons, 1973.